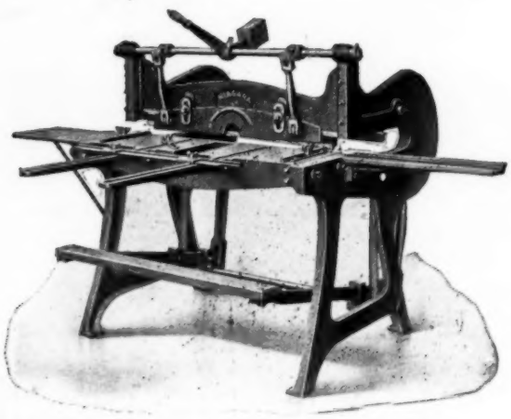
JUL 23 1917
UNIV. OF MICH.
Engineering
Library

AMERICAN ARTISAN and Hardware Record

VOL. 74. No. 3. CHICAGO, JULY 21, 1917. $2.00 Per Year.

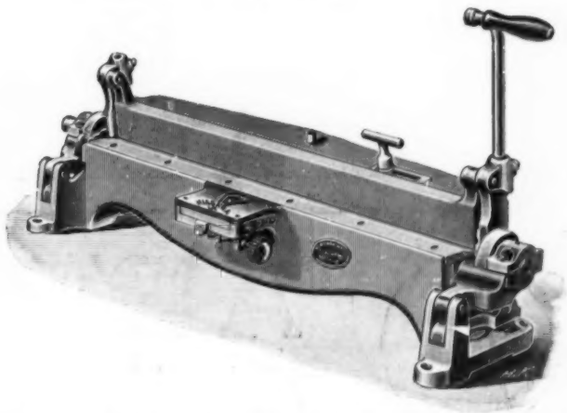
"NIAGARA"

MACHINES AND TOOLS FOR SHEET METALS



"NIAGARA" FOOT GAP SHEARS

These shears work well and can be relied upon to give good results. A series of compound levers, which pivot on the housings, connect the cross head to the treadle rods. The Treadle Bars are of steel and extensible to permit the regulating of the leverage according to the thickness of the material to be cut.



"NIAGARA" KEYSTONE ADJUSTABLE BAR FOLDER

For bending the edges of light sheet metal at various angles to form locks, square joints, etc. It also forms rounded edges ready for inserting a wire. The edge of the sheet is clamped while the bending takes place and a fold of uniform width the entire length is obtained.

THE **"NIAGARA" LINE OF MACHINES AND TOOLS FOR SHEET METALS** is very large and complete. No matter what may be wanted in either **POWER MACHINES OR HAND TOOLS,** we are able to furnish the **SHEET METAL WORKER and TINSMITH** with the very best.

Only the best of materials are used in the manufacture of the **"NIAGARA" MACHINES AND TOOLS** and every worthy improvement is readily made, keeping them up to date.

A part of the large list of **"NIAGARA" MACHINES AND TOOLS** follows:

MACHINES FOR SEAMING ROUND FURNACE PIPE, FOLDERS AND BRAKES, FORMING ROLLS, ROOFING TOOLS, GUTTER BEADERS, FIRE POTS, ETC.

Illustrations and descriptions together with prices are given in our latest catalog. ***Get it now.***

OUR CATALOG NO. 50 S. A. SHOULD BE IN YOUR SHOP — WRITE FOR IT — TODAY

NIAGARA MACHINE & TOOL WORKS

BUFFALO, NEW YORK

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, 50 and 51.

COAL RANGES

THE ONLY REAL RUST PROOF RANGE

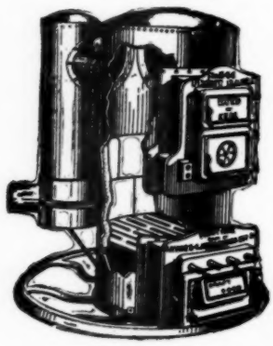
RINGEN STOVE CO.
DIV. OF AMERICAN STOVE CO.
ST. LOUIS, MO.

THE BODY and all FLUES, exposed to Smoke and Soot are PORCELAIN ENAMELED
NO RUST! - NO BLACKING! - ALWAYS CLEAN!

SAN FRANCISCO, CALIF.
715 INDIANA ST.

FRESH AIR HEAT MEANS HEALTH

A Regular Gold Mine



Sectional front view

to the Dealer, because it is a Bonanza to the Consumer (saving him trouble and repair expense, making his fuel bills smaller and insuring easily controlled, uniform and healthful heat, ventilation and humidity throughout his house) the

Rear view

FRONT RANK Steel Furnace

is, on its own merits alone, the most attractive Warm Air Furnace proposition on the market today. Its longer fire travel gets most heat from the fuel; it stays in order, is easily cleaned and has no direct draft to warp and buckle.

Then we help the dealer who handles the FRONT RANK, by furnishing all sorts of "dealer helps," and by a National Advertising Campaign in which we are spending thousands of dollars —one effect of which will be to make the FRONT RANK in greater demand.

Combine the two things—the best Warm Air Furnace on the market, and the Service with which we are backing this furnace—and it is, indeed, "a regular Gold Mine" to the Dealer.

Are you a member of the FRONT RANK Club?
If not, write us for particulars.

Good bye! We're going home FRONT RANK is too hot for us.

TRADE MARK
REG. U. S. PAT. OFF.

Haynes-Langenberg Manufacturing Co.
4058 Forest Park Ave. ST. LOUIS, MO.

ESTABLISHED 1880
Representative of
The Stove Tin Hardware
Heating and Ventilating Interests
PUBLISHED EVERY SATURDAY

AMERICAN ARTISAN and Hardware Record

Address all communications and remittances to
DANIEL STERN
Publisher and Proprietor
910 South Michigan Avenue
Chicago Illinois

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID $2.00
FOREIGN COUNTRIES ONE YEAR POSTAGE PAID $4.00 CANADA ONE YEAR POSTAGE PAID $3.00

Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago Illinois under Act of March 3rd 1879

VOL. 74. No. 3. CHICAGO, JULY 21, 1917. $2.00 Per Year.

FROM PRESENT indications, it appears that the United States Senate Finance committee, who have in charge the work of revision of the war tax bill, have found a way to put a slight curb on the enormous profits of the catalog houses and check in a measure the depredations of these houses in the various communities of the country. It is to be done by taxation, charging one cent for each twenty-five cents or fractional part thereof. According to the plan of the finance committee, it will be obligatory that the shipper pay the bill.

Proposed Tax on Parcel Post Packages

During a recent discussion of the proposed war tax bill, it was stated that seventy-five per cent of all the parcel post business of the country was that of catalog houses.

It was also stated that it was through trickery that they had secured a reduction of the postal rate on catalogs. This was the statement of Representative Halvor Steenerson of Minnesota, who is a member of the House Post Office Committee. He further stated:

"Formerly mail order catalogs paid a rate of one cent for every two ounces or a fraction thereof, which brought a little over eight cents a pound, where today big concerns like Sears, Roebuck and Company, which issue six or seven million catalogs every year, can ship them by freight to the distributing points and thence by parcel post at local zone rates of less than two cents per pound. Catalogs weighing five pounds formerly paid forty cents each in postage but now they are shipped by freight to central points and mailed to the first two zones at five cents for the first pound and one cent for each additional pound, making nine cents for the first pound and one cent for each additional pound, making nine cents postage to be added to the freight charge of not over five or six cents or fourteen or fifteen cents in all.

"This means a saving of twenty-five cents on each catalog or to one firm like that cited above, of $1,500,000 in a year. There are a large number of mail order houses in the United States, and the total of bulky catalogs, would under the old rate have brought in $12,000,000 revenue instead of $7,200,000 as at present."

These figures are certainly significant.

Representative Steenerson pointed out that during the year after the new parcel post rates went into effect, one catalog house increased its capital stock by twenty million and declared a dividend of fifty per cent. This same year the Post Office Department incurred a deficit instead of a surplus as in the year before.

As the taxation bill was presented to the House, it contained clauses which taxed the express and freight of the nation but made absolutely no provision for the parcel post, which is the mainstay of the catalog house. The Senate Finance Committee which incorporated the provision taxing parcel post packages, stood to its guns, however, and the war revenue bill, as reported to the Senate, carries this provision.

For years catalog houses, to repeat an oft told tale, have been evading all taxation, in some instances right in their home town where the local taxing bodies have had to resort to the courts to collect the tax due the municipalities. Of course they pay no tax in the county from which they draw their trade and their continuation of growth in many cases has meant the ruination of the small merchant.

If, at this time, the war is to bring about an equalization of the burden of taxes we will be thankful for this benefit the great war has brought us.

In this connection every association either of merchants, jobbers or manufacturers as well as individuals, can make no mistake by getting in touch with the representatives to Congress in their districts and urge on them the importance of imposing this tax on concerns who have thus far successfully evaded every form of taxation. Let your representatives at Washington know how you stand in the matter and the feeling of all merchants in your community. Flood them with letters and telegrams and they will soon see the way in which their constituents wish them to go and act accordingly.

Do it today.

WRITERS who comment on retail advertising and are continually "panning" the hardware dealer because of his lax, ineffective advertising, occasionally find it advisable to look at the matter from a different point of view. But that different point of view does not remedy the situation—the fact remains that a very large portion of retail advertising is too vague, too indefinite or too unattractive to be really effective.

What's Wrong With Retail Advertising?

We are in receipt of a letter from Hamblin & Son, hardware dealers at Walker, Iowa, in which they state, "We believe in advertising, but think that the country editors are more to blame for poor advertising among retail dealers than the dealer himself, as to using proper type and display." This statement indicates that the dealer who leaves his advertising in the hands

of the country newspaper doesn't have much chance of gaining business therefrom.

Conversely, it signifies that the dealer who takes care of the details himself and considers the arrangement thoughtfully and carefully can have advertising that will do more than fill up space. The dealers in question have themselves established the truthfulness of this latter observation, for they enclosed an advertisement for criticism, which although appearing in a small town paper, has all the earmarks of the big city newspaper advertisements that are so highly resultful because of their layout, text matter and price quotations.

The conclusion that the retail hardware dealer may draw is that his advertising is certain to bring results if he is but willing to put forth the proper effort. He should make it incumbent upon himself or upon someone in his employ to give proper attention to the matter of appearance and copy of every advertisement. He should make it a point to give each ad an attractive appearance, text matter that is informative and creates desire, and specific quotations, which serve to further enhance the interest of the reader. Thousands of dealers throughout the country have already found that carefully-prepared advertising is a material factor in the success of their business.

Hamblin & Son further say in their letter that *a great majority of retail merchants take too few trade papers and what few they take they read too little.* This firm subscribes to four trade papers, including AMERICAN ARTISAN AND HARDWARE RECORD. They have been in business for more than forty years and surely ought to have a proper conception of the value of a trade paper to the retail hardware dealer. The moral is obvious.

Service Is Biggest Factor in Success.

NO MAN ever achieved real success without rendering a real service to those with whom his work brought him into contact—his employers, his fellow employes, the customers of his firm. If he is "in business for himself," the statement still holds good, for in that case the question of service is even more important.

The truly progressive retail hardware dealer, sheet metal contractor, warm air heater installer—or whatever his business may be—looks upon his relation with any customers in the light of how efficiently he can serve them and earn the profits to which such service entitles him. It isn't first and foremost "profits" with him, but rather "efficient service" and then, based upon that service, a fair and legitimate return in the shape of net profit.

The idea is remarkably well expressed in an editorial published in a recent issue of the excellent store paper of E. Hackley, Earl Park, Indiana who operates a very successful hardware store in that city, and we quote from it the following:

"The pleasure a conscientious workman takes in doing an important job in a thoroughly efficient and good way—this is the pleasure we take in making our store service the very best possible.

"It would hardly be correct or truthful to say that our only idea in extending store service was to please our customers and to gratify ourselves.

"The thing back of the whole proposition is of necessity profit. We may as well be frank about it. It is perfectly legitimate to be in business for profit and we feel we need make no apologies."

Can you think of a better foundation on which to build up and maintain a successful business—than a growing list of satisfied customers, satisfied because of well rendered service?

Of course, it is necessary in order to serve others well, that we have their interests at heart and also look upon our own interests from that standpoint, but to begin with we must have a genuine liking for our work, and this Mr. Hackley expresses very nicely in these paragraphs:

"We are frank to tell you that there is much more to a business like ours than the mere making of profits.

"We run this store because we are interested in it, because we know this kind of business and because we would rather do it than anything else in a business way.

"To have people compliment us on the appearance of our store, on the excellence of our goods and on the effectiveness of our methods means something to us that money cannot buy.

"On the other hand, when anybody comes to us with a well-founded criticism about our goods or our methods or anything having to do with the store we regard him as a friend.

"We most earnestly want to make this store the best of its kind around here. We shall succeed if you will help us with your friendly criticisms. And if you have any commendations to spare throw them in also. The conscientious worker never objects to a well-spoken word of praise."

Note the appeal to customers for their cooperation in making the store's service still better. Isn't that about the best possible way to make people think well of your store, your merchandise, your methods, your service?

For this we must keep in mind, that nowadays no man has any "vested right" to a living or a profit unless by his work or by his investment he is rendering a real service to those from whom that living or profit is to be derived.

How Is Your Scrap Heap?

CONSERVATION is fast becoming one of the principles of good business, not from the fact that it means the spending of more money for new equipment as it does the saving of a vast amount of material which was formerly allowed to rust and rot. This is due to the shortage of supplies in many lines and with the enormous demands which are being made, particularly on the metal producing trades of the country, it is well for each of us to bear the idea of conservation always in mind.

It has been noted, for instance, that the railroads, called on to use every possible bit of equipment are going to the scrap heap for additional material with which to work. Old engines are being patched up with such good results that they are nearly as good as new although some of them over twenty-five years old. The same is true of worn and partly wrecked

box cars. They are no longer burned but salvaged and reconstructed to be used again.

There is no doubt that this takes a great deal of time and money and many of the railroads would rather have new equipment but it is impossible to secure it with the demands so strong in so many lines against them for similar material, so the discarded cars and engines have to be patched up and placed in service again.

There is no doubt the railroads' scrap heaps are the largest of all American scrap heaps and by that token have the most material which can be salvaged. But these conditions exist in every line of business and manufacture to a greater or less extent and the example which is being set can well be followed by us all.

The garbage pail is the index of household thriftlessness as is the scrap heap that of the manufacturer or merchant and the great war will have exerted a wonderfully beneficial influence on national economy if it leads to the recovery of the vast wealth which is in them.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD

Samuel H. Jacobs, Vice-President and General Sales Manager of the Fanner Manufacturing Company, Cleveland, Ohio, dropped in to see me during the week while on a business trip to Chicago. "Sam" is evidently enjoying life, for he is full of cheerfulness and enthusiasm. We had a very pleasant chat and witticisms were thrown back and forth until finally he "floored" me with a swimming story which was as follows:

Two negro roustabouts at New Orleans were continually bragging about their ability as long distance swimmers, and a steamboat man got up a match. The man who swam the longest distance was to receive five dollars.

The Alabama Whale immediately stripped, on the deck, but the Human Steamboat said he had some business and would return in a few minutes. The Whale swam the river four or five times for exercise, and by that time the Human Steamboat returned. He wore a pair of swimming trunks and had a sheet-iron cook stove strapped on his back. Tied around his neck were a dozen packages containing bread, flour, bacon and other eatables. The Whale gazed at his opponent in amazement.

"Whar yo' vittles?" demanded the Human Steamboat.

"Vittles fo' what?" asked the Whale.

"Don't yo' ask me fo' nothin' on de way ovah," warned the Steamboat. "Mah fust stop is New Yawk, an mah next stop is London."

* * *

Robert B. Nixon, who represents E. C. Atkins and Company on the South Atlantic coast, was talking of the business aptitude of the wife of a friend of his who told him:

"I found such a wonderful bargain," said Mrs. Flatter.

"What was it?" asked her husband.

"You know I went downtown to buy a hat. Well, just as I got in the store they put up a sign, 'All hats at half price!'"

"So you only had to spend half of the money you intended."

"Oh, no, I bought two hats instead of one."

* * *

During these days of conventions in all crafts and walks of life and the strenuous days through which our country is passing, I can remember no better sentiment than that expressed by Horace Mann when he said:

"It is the sublimest truth which the history of the race has yet brought to light, that God has so woven the fortunes of all men into one inseparable bond of unity and fellowship, that it can be well with no class of men, who in their own self-seeking forget the welfare of their fellowmen. Nature has so bound us together by the ties of brotherhood and the endearments of sympathy and benevolence that the doing of good to others opens deep and perennial well springs of joy in the human soul."

* * *

It is impossible to dwell too much on the fact that at the present time, when we are engaged in the greatest war in the world's history, there is something that all of us can do to hasten the end of the conflict. Those of us who do not shoulder a gun or a hoe will find that there are countless other ways of assisting and co-operating, thus lending the aid to the government that she has a right to demand, but which should be given of our own accord eagerly and willingly whenever the opportunity presents itself. This point is admirably brought out by Edgar Guest in the following poem:

Your Country Needs You.

The country needs a man like you;
It has a task for you to do.
It has a job for you to face,
Somewhere for you it has a place.
Not all the slackers dodge the work
Of service where the cannons lurk;
Not all the slackers on life's stage
Are boys of military age.
The old, the youthful and unfit
Must also do their little bit.

The country needs a man like you;
'Twill suffer if you prove untrue.
What tho you cannot bear a gun,
That isn't all that's to be done.
There are a thousand other ways
To serve your country through the days
Of trial and the nights of storm.
You need not wear a uniform,
Or with the men in council sit
To serve the Flag and do your bit.

Somewhere for you there is a place,
Somewhere you have a task to face.
There's none so helpless or so frail
That cannot, when our foes assail,
In some way help our common cause,
And be deserving of applause,
Behind the Flag we all must be,
Each at his post awake to see
That in so far as he has striven
His best was to his country given.

You can be patient, brave and strong,
And not complain when plans go wrong.
You can be cheerful at your toil,
Or, till, perhaps, some of soil;
You can encourage other who
Have heavier, greater tasks to do;
You can be loyal, not in creed
Alone, but in each thought and deed;
You can make sacrifice, too.
The country needs a man like you.

UP TO THE MINUTE NEWS SIFTINGS

The Howard Stove Company, Beaver Falls, Pennsylvania, will build a moulding plant addition to cost about $12,000.

The Bergstrom Stove Company, Neenah, Wisconsin, has withdrawn all former quotations, effective July 16th, and will quote promptly on request.

CABIRANGE MANUFACTURING COMPANY NOW LOCATED AT TAYLORVILLE, ILLINOIS.

At a meeting of the directors of the Cabirange Manufacturing Company of Belleville, Illinois, about two months ago, it was decided to remove that enterprise to Taylorville, Illinois, if the people of that city would take a certain amount of the Company's stock. This they agreed to do and arrangements were made for the transformation of the old Hershfield and Piper factory at Taylorville into a stove foundry.

At a meeting subsequently held, Glenn F. Shumway was elected president; H. M. Hollock, vice-president; E. R. Wright, treasurer; and R. L. Holloway, patentee, was made secretary and general manager.

The "Cabirange" is of cast iron and the exterior is porcelain enameled in either blue or white. It is made in three different models: The coal model burns either hard or soft coal or wood; the gas model burns either natural or artificial gas, and the combination model burns gas, coal or wood. According to the manufacturers it is possible to run all sections of the range with one fuel, or when desired, a part of the range can be heated with one fuel and a part with another. The "Cabirange" burns either the manufactured or natural gas in the same flues that are used for coal or wood.

But one damper is required to control all sections of the stove, making it simple to operate. The bake oven is on top of the stove and this does away with the old method of stooping down when using the oven. The lower part of the range is used as a broiling and roasting oven and warming closet.

NESTED STOVE PIPE PACKED IN STEEL CASKS.

Corco metal products include a "Bull Dog Lock" nested stove pipe which is put up in indestructible steel casks. The packing of this pipe, according to the manufacturers, is the last word in packing construction. No longer need the dealer be troubled with damaged shipments and excessive freight on heavy wooden crates. The Corco steel-packed pipe comes to the dealer in the same condition it leaves the factory. Twenty-five or fifty joints are packed in a steel cylinder with strong wood heads, making a compact package that will stand severe handling.

The pipe is said to be a very popular style as it has a straight lock seam, is easily fitted together, and is fastened with a strong catch that makes the joint firm and rigid. It has no tongue or slots in the lock and is made from even colored, polished, planished and galvanized steel sheets of 30, 29 and 28 gauges, in 4, 4½, 5, 5½, 6 and 7 inch sizes. Further information, together with details of stove pipe accessories, such as tee-joints, flue thimbles, flue stops, elbows, dampers, etc., will be sent upon request, by the Whitaker-Glassner Company, Wheeling Corrugating Department, Wheeling, West Virginia.

CHICAGO STOVE AND RANGE COMPANY TO BUILD PLANT AT BENTON HARBOR, MICHIGAN.

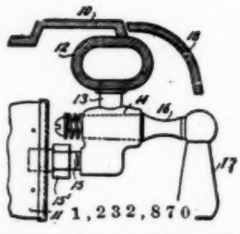
Benton Harbor, Michigan, just across the lake from Chicago, is to have a new industrial unit. Arrangements have been completed whereby the Chicago Stove & Range Company, whose factories have been at Mattoon and Fulton, Illinois, with general offices in Chicago, will locate there, the offices being maintained in the Windy City. A ten-acre tract on the Big Four Railroad was purchased, and the construction of large brick buildings will be commenced at once. There will be a foundry 80 by 200 feet and a two-story factory and warehouse measuring 50 by 200 feet in the first unit of the plant.

The company has been in business twenty years, manufacturing the well-known "Solar" stoves and ranges. It has a capital stock of $200,000, of which $150,000 is common and $50,000 preferred stock. John E. Fitzgerald is president; F. L. Bradford, vice-president; H. S. Gray, secretary; W. H. Seitz, treasurer; and H. A. Furber, general manager.

The new plant of the company will be one of the largest in Benton Harbor and will have an excellent location, being on the ship canal with ample rail facilities close at hand.

PATENTS GAS STOVE MANIFOLD.

Under number 1,232,870, United States patent rights have been granted to Arthur W. Walker, Malden, Massachusetts, for a gas stove manifold, described in the following:



In a gas stove having a top and a burner, the combination of a horizontally extending manifold close to the level of the top; a cock depending from the manifold and discharging into the burner, arranged with its stem horizontal; an operating arm for the stem projecting therefrom and swinging in a vertical plane; and a guard extending from the edge of the top over the manifold and to the vertical plane of said arm, the whole being arranged with the arm nesting close under the edge of the guard, and with said guard removable from proximity to said manifold and arm.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 44 to 49 inclusive.

The Chicago Hardware Company, Chicago, has awarded the contract for a 50x96 foot, two-story shop building to cost $20,000.

The American Fork and Hoe Company, Jackson, Michigan, has awarded a general contract for a three-story addition to its factory.

The Ohio Wire Goods Manufacturing Company, Akron, Ohio, has recently been incorcorporated with a capital stock of $100,000 to manufacture wire goods. The incorporators are C. F. Schnee, John C. Grim, Joseph Thomas, F. I. Russ and C. E. Humphrey.

J. J. Stangel, Manitowoc, Wisconsin, has awarded the contracts for the erection of his new, three-story wholesale and retail hardware store which will be built at the corner of Eighth and Quay Streets, Manitowoc. It is expected that the new building will be completed and ready for occupancy by the first of the year.

The Security Tool Works, Incorporated, Chicago, have been incorporated with $10,000 capital. They manufacture gauges, taps, dies, forming tools of all kinds, etc., and goods are now ready for market. The officers are W. L. Lindgren, president; A. Abrahamson, vice-president; B. Clarke, secretary; and H. B. T. Chandler, treasurer.

The Torrington Company, Torrington, Connecticut, who has been doing business under a Maine Charter with a capital stock of $4,500,000, has taken out a charter in Connecticut under the same name with an authorized capital stock of $11,000,000. The incorporators are Allen E. Moore and George F. Jebbett of New York City and S. C. T. Todd of Brooklyn, New York. The Connecticut Charter is drawn for the manufacture of tools, implements and appliances for the activities of the operating subsidiary companies which now make motorcycles and bicycle parts, vacuum cleaners and carpet sweepers, spark plugs, and many other kinds of hardware, tools and machines.

AMERICAN STEEL & WIRE COMPANY TAKES STEPS TO PREVENT ADVANCES IN WIRE PRICES

The American Steel & Wire Company has taken an unexpected step to prevent any further abnormal advance in prices of wire nails and it is possible that the same effort may be made to check advances in prices of other wire products. The Sales Department has notified regular customers that wire nails will be furnished to them at $3.20 per keg, the same price which is being obtained from the Government, upon condition that only a reasonable profit should be charged to the ultimate consumer. Inquiry brought out the fact that 50 cents per keg was considered a reasonable profit. This would make the retail selling price $3.70 per keg, whereas the independent manufacturers have been charging $4.00 per keg in wholesale lots. It is understood also that all retail sales were made at $4.50 per keg or higher. The present innovation, made by the largest interests, will probably cause independent manufacturers to meet the price of $3.20 per keg or suspend sales. The American Steel & Wire Company controls about two-thirds of the entire wire output of the country, and it is producing wire nails at the rate of 40,000 kegs per day.

DR. E. E. PRATT NO LONGER CHIEF OF THE BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

Dr. E. E. Pratt, Chief of the Bureau of Foreign and Domestic Commerce, is no longer in the government service. His resignation followed an altercation in the newly-organized Advisory Board of the Exports Council, of which he was secretary, on Tuesday, July 17th.

Dr. Pratt is regarded as one of the country's foremost trade experts and had distinguished himself in the activities of the Department of Commerce. In sending his resignation to President Wilson, he said he would have regretted leaving the commerce bureau at any time, but especially at this time because of the war activities that have been placed in its care.

Dr. Pratt is succeeded by Burwell S. Cutler, first assistant chief, who will assume charge until a permanent appointment is made.

CHICAGO TO STOP UNLICENSED SALES OF FIREARMS.

Chief of Police Schuettler of Chicago has begun enforcement of the ordinance forbidding the display and unlicensed sale of firearms. A two year fight on the part of the city to establish the validity of the measure ended last week when Judge Smith in the Superior court dissolved the injunction he granted months ago. He acted in accordance with the ruling of the state Supreme court. Under the terms of the ordinance a permit from the general superintendent of police is necessary before any one may purchase a revolver.

A good system will help you to make one dollar profit grow where only a half dollar grew before. Systematize your business enough to eliminate the leaks and losses.

HARDWARE MANUFACTURERS START MEMBERSHIP CAMPAIGN.

There are at present 462 Members in the American Hardware Manufacturers' Association, and a campaign has been commenced to increase this number to 500. President Plumb has sent a letter to the members, together with a list of manufacturers who ought to belong to the Association, and he asks that each member see one or two men on the list whom he knows personally, and back up the campaign for membership by personal solicitation.

The president also encloses the following letter which Secretary-Treasurer Mitchell is sending to the prospective members, telling them the advantages the Association affords, and urging them to join, at least for the duration of the war:

GENTLEMEN:

Did I make a mistake in my former letter to you in dwelling entirely on the fact that we can assist the sales department of your business to increase your trade with the hardware jobbers?

You will not minimize this chief feature of our work, I am sure, if I call your attention to the fact that as the organization of the hardware manufacturers of the country, nearly 500 strong, we are in a peculiarly fortunate position at this time to assist the industry, to represent the industry in its war problems, to represent you in your war problems.

In the past two years the American Hardware Manufacturers' Association has had a very rapid expansion in membership, and now the war makes us realize the extent of our good fortune in this respect.

From being simply a sales promotion organization, perhaps a little selfish in pushing the business of our members only, we have, almost unconsciously, developed a wider range of activities which gives us a far wider appeal.

We are a patriotic organization doing our best to make the war a success. At the same time we are the mouthpiece of our members at Washington.

Frankly we need your help.

Even if you believe your sales department would not avail itself of our sales promotion work we want you as a member. In union there is strength and we need the added strength that more good members will give us.

Suppose I put it this way. Put your name on our membership list for the period of the war. If when peace comes you want to resign I shall not press you to remain with us.

Join us in our good work. The industry deserves your support.

Your check for $17.50 will cover the entire necessary expense of membership for the remainder of our fiscal year, until November 1 next, and I shall not call on you for *any other* contributions until next year's dues of $35 are payable.

Yours very truly,
F. D. MITCHELL,
Secretary-Treasurer.

It's poor economy to let your business system break down your physical.

H. W. GOELLER ADDS ANOTHER PRIZE TO HIS LIST.

Prizes are becoming almost an every-day affair to H. W. Goeller, the live-wire advertising manager of the Palace Hardware House, Erie, Pennsylvania, who has just added another to his list of laurels. In a recent contest conducted by the Millers Falls Company, Millers Falls, Massachusetts, he walked off with the first prize of $150 for the best window display and newspaper advertisement.

Mr. Goeller has been winning prizes for years and evidently the habit has become fixed. In the 1915 AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition one of his arrangements took First Prize and in the 1916 Competition third honors went to him. Many of his excellent displays and newspaper advertisements have been reproduced in this publication and commended for their timeliness and attractive power. To Mr. Goeller we say, "Congratulations. Keep up the good work."

CLEVELAND DIE, TOOL AND ENGINEERING COMPANY CHANGES NAME.

The Anderson Manufacturing Company, Elyria, Ohio, has been organized to continue the business of the Cleveland Die, Tool and Engineering Company under the new name and to increase the capital stock. The Company manufactures tools, jigs, fixtures, special machinery, punches, etc., and their increased capital will make possible greater producing capacity. The officers are: A. G. Anderson, president; George D. Nicholas, vice-president, and E. M. Brush, Secretary.

STANLEY H. ROSE TAKES CHARGE OF COMMERCE BUREAU'S NEW YORK DISTRICT OFFICE.

Stanley H. Rose, of the export department of the Barber Asphalt Company, Philadelphia, has resigned his position to take charge of the New York district office of the Bureau of Foreign and Domestic Commerce. This office will be of special importance in the department's work of licensing exports under the Espionage Act, as most of the applications for licenses from the New York district will be received there, and certain classes of licenses will be issued without consulting the Washington office. Mr. Rose has had previous experience as manager of the New York office, and has served the Bureau in various other capacities in the past. He commenced his new duties on Monday, July 16th.

TRADEMARK ON TOGGLE BOLTS.

Under serial number 102,674, copyright has been granted to the U. S. Expansion Bolt Company, New York City, for the trademark shown in the accompanying illustration. The particular description of goods is toggle bolts. The company claims use since about August 1, 1916, and the claim was filed April 2, 1917.

102,674
ARROW

EXHIBITS IN AMERICAN ARTISAN WINDOW DISPLAY CONTEST

NOVEL ARRANGEMENT OF TOOLS FOR WINDOW DISPLAY.

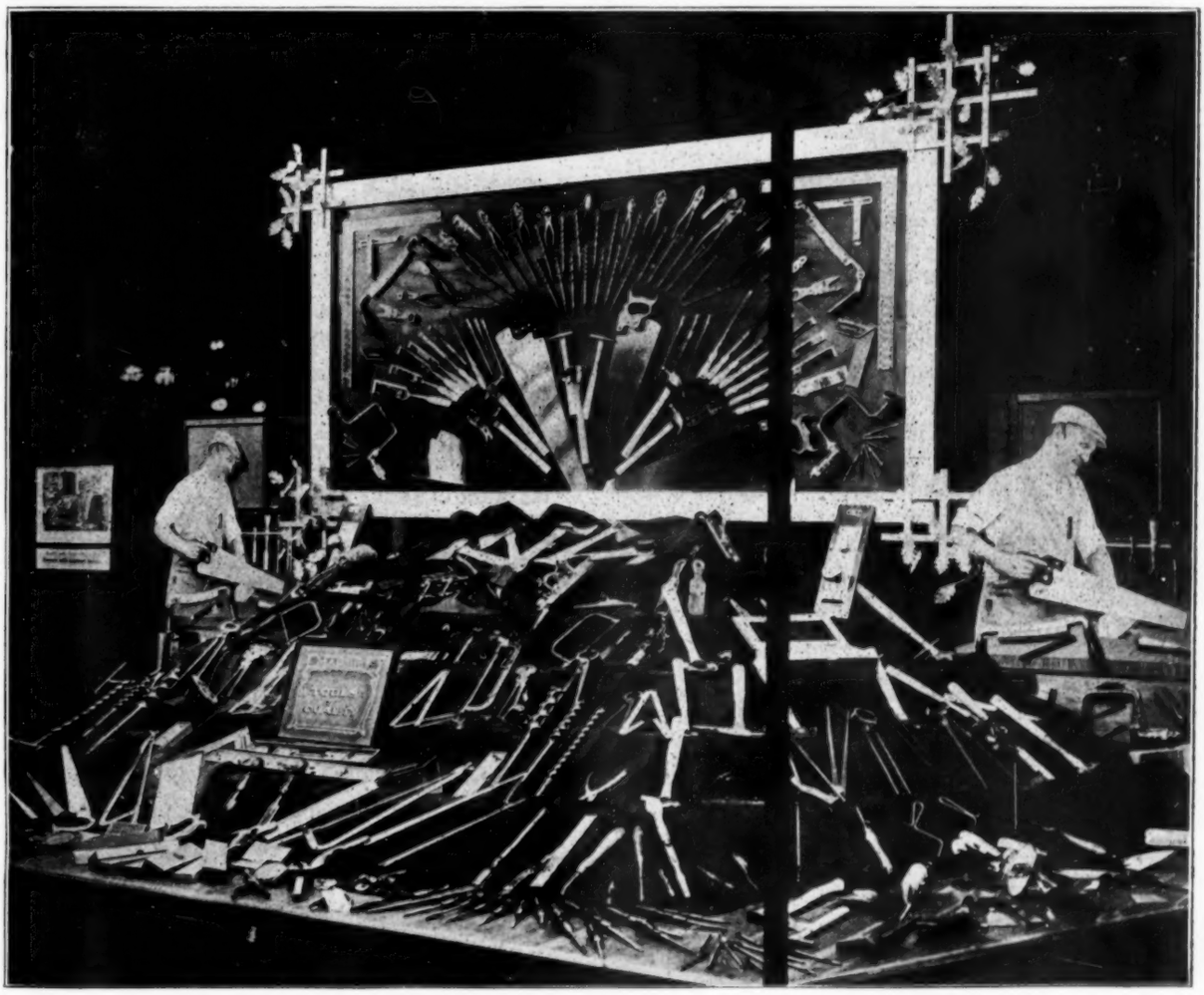
From the accompanying illustration it will be seen that N. P. Elufson, who does the window trimming for J. R. Mahoney, Incorporated, Deming, New Mexico, evidently had no patience with the stereotyped method of displaying tools, for he prepared an exhibit which is decidedly novel and at the same time practicable. This unique window display was awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

The display medium proper is a large pyramid, the sides of which are built as steps and covered with black flannel. This pyramidal structure occupies practically the entire floor space, and leaves a margin near the window which is trimmed with carpenters' gauges, tapes, saws, saw sets, screw drivers, chisels, hammers, hatchets, paint chippers, trowels and similar tools.

On the steps are shown the same variety of tools and in addition hack saws, scroll saws, tongs, door sets, file cards, planes, builders' levels, rules, nippers, pliers, etc. Here another innovation is noticed: The tools are not laid down flat on the steps, but are arranged on an incline from each step to the one above.

The large background display is made of composition board painted black, and the tools are neatly and symmetrically fastened by means of black wire. Here are shown saws, try squares, bevels, hammers, wrenches, pliers, braces and different sizes of chisels and bits. The cut-outs at the sides are furnished by the manufacturers and lend life to the display, as also do the frame and corner ornaments of the background display which are painted an aluminum color.

This setting and that of the pyramid causes the tools to stand out in sharp contrast to the black backing, and the contrast is a great factor in attracting the attention of passers-by. Altogether it is an arrangement which catches the eye and induces the



Window Display of Tools Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by N. P. Elufson for J. A. Mahoney, Incorporated, Deming, New Mexico.

possessor of those eyes to approach for a closer observation.

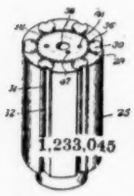
GRAND AMERICAN HANDICAP TO BE HELD AT CHICAGO AUGUST 20 TO 25.

The Grand American Handicap, one of the greatest events of the year in the trap-shooting world, will take place at Chicago during the week of August 20th to 25th. The place of action for this year's tournament is ideal, being the spacious grounds of the South Shore Country Club—Chicago's "million dollar club house." Sixteen traps will be used and the targets thrown over the waters of Lake Michigan. Experts from every state in the Union will compete for honors, and it is expected that there will be 1,000 entries, to say nothing of the thousands that will be spectators only. When the classic was held at Grant Park in Chicago in 1915, 50,000 people attended. This year's attendance is expected to pass that record.

Everett C. Brown, the club's president, contemplates furnishing the trapshooters with plenty of entertainment when they are not facing the traps. Athletic events will be a sideline feature. Some of the best swimmers of the country will give exhibitions and track and field events will be staged. There will also be evening functions. In addition, the gun clubs of the Windy City are working on entertainment plans and all the hotels and amusement centers are cooperating. Indications are that it will be the greatest trapshooting event in the history of the sport.

SECURES PATENT FOR REAMER.

William H. Frick, Philadelphia, Pennsylvania, has procured United States patent rights, under number 1,233,045, for a reamer described in the following:



In a reamer, the combination with a hollow holder, of cutters rotatably mounted upon the holder and provided with gear teeth, a gear journaled upon the holder and engaging said teeth, an expansible hub for the gear journaled in the bore of said holder, and means for expanding said hub.

RELIABLE BOXWOOD RULES IN VARIOUS STYLES AND SIZES.

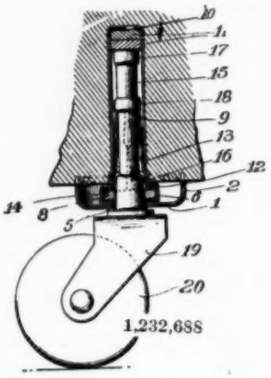
Included in the extensive line of Lufkin Measuring Tapes and Rules are various styles and sizes of box-

Lufkin Boxwood Rule with Level.

wood rules, one of which is pictured herewith. According to the manufacturers, nothing but the best of materials is used in the production of these rules. The boxwood is allowed to season for at least two years; great care is given to the metal used in the joints and trimmings; the graduations are guaranteed accurate; and because of their superior finish the rules present a very attractive appearance. In addition to the regular markings, rules with metric graduations on both sides, or with metric on one side and inches on the other, also with English markings, can be obtained if desired. Like the remainder of the Lufkin line, the boxwood rules are said to make possible ready sales and pleased customers at every opportunity, and catalog describing the various items can be obtained by addressing the Lufkin Rule Company, Saginaw, Michigan.

SOCKET STRUCTURE FOR CASTERS PATENTED.

John Adolph Johnson, Meriden, Connecticut, assignor to The M. B. Schenck Company, Meriden, Connecticut, has obtained United States patent rights, under number 1,232,688, for a socket structure for casters described in the following:



A furniture caster socket, comprising a socket having an outwardly extending flange at its bottom, a tubular spring element contained within said socket, a track plate having a centrally disposed and inwardly projecting open hub, a cup shaped member seated on said plate and having an opening which snugly surrounds said hub the end of which latter is bent and clamped against the floor of said member, and an anti-friction ring seated within said member, said socket flange seated on said ring and the upper edge of said member bent and firmly clamped against said flange, whereby all the aforesaid parts will form a unitary structure.

ADVERTISING IN BUSINESS PAPERS.

In his address at the convention of the Associated Advertising Clubs of the World at St. Louis, Harry Tipper summed up his suggestions on how the business papers should be used for advertising, in the following words:

First: Business papers should be used regularly so that the stability and character of the organization will be emphasized by the habits of its own advertising.

Second: The advertising should contain information in respect to the product which is of value to the audience.

Third: This information should be applied to the particular field represented by the publication and in the terms which are ordinarily used in that field.

Fourth: The space used should be of an amount to tell the story.

Fifth: The display used should be only such as will amplify and illustrate the story which is being told.

A careful study of this matter has indicated that the specialized audience of a business paper merits much more careful investigation of the space to be used and the character of the copy than is usually considered. I have seen business concerns go to the expense of several hundred dollars, to provide an exhibit of their goods for an audience of 500 to 1,000 engineers, when the same firms have considered $15 to $20 a sufficient amount to pay for a piece of copy which was expected to reach ten or twenty times that number.

DEALERS SHOULD BASE PRICES ON PRESENT COSTS

By Irving S. Kemp, Sales Manager, Vaughan & Bushnell Manufacturing Company, Chicago.

The absolute necessity of keeping step with rising costs has been so deeply impressed upon the retail hardware dealer that the subject should need no further iteration. However, many dealers fail to realize the importance of knowing the present market prices of the various items in their stock, and keeping these items priced in proportion to the existing cost. In order to do a successful business in these times of steady increases, they should base their selling prices on *what it will cost them to replace the respective articles in the market.* A tool which formerly cost 40 cents and retailed at 75 cents yielded a good profit. But if it now costs the dealer 75 cents to buy the same tool which he has in stock, and he continues to sell the one from stock at 75 cents, even though it only cost him 45 cents, he clearly is doing business without making a profit, for it will cost him all of the 75 cents to replace the tool.

Irving S. Kemp.

This is the gist of the very timely and important letter received from Irving S. Kemp, Salesmanager of the Vaughan and Bushnell Manufacturing Company, Chicago. Where the selling of hardware is concerned, Mr. Kemp knows fully whereof he speaks, and the note of warning sounded in the letter should be taken to heart by every retail hardware dealer who has not already learned the lesson of keeping step with rising costs:

To American Artisan and Hardware Record:

We believe one of the most valuable sections of your paper today is the section devoted to "Current Hardware and Metal Prices."

From observations it would appear to the writer that many hardware dealers are not taking advantage of information such as you give in keeping their stock priced in proportion to the present cost.

Much has been said on this subject in the past few years, but it will be necessary to continue to repeat the warning if many hardware dealers are going to go through the final period of readjustment and continue in business.

Assuming that in pre-war times a tool cost a dealer 40 cents, he would probably sell this tool for 65 cents or 75 cents. Since August, 1914, prices have been constantly advancing and it is not at all unlikely that before the dealer's stock of the above tool was exhausted, his cost would be 65 cents. It would be very clear if a dealer originally buys a tool for 40 cents and retails it for 65 cents and then has to replace the tool at 65 cents, that he has made no profit on the original transaction and under such conditions it is only a question of time when his working capital will be exhausted and he will have to go out of business.

It might be interesting for dealers to compare their present prices on a few leading sizes of hammers with what they should be securing today. No drop forged hammer (nail) either first or second quality should be selling at less than $1.00 today. The following prices would be in line with the market:

Number 41½, 16 ounce Vanadium Hammer, $1.50 each.

Number 11½, 16 ounce first quality Nail Hammer, $1.25 each.

Number 111½, 16 ounce second quality Nail Hammer, polished, $1.10 each.

Number 111½, 16 ounce second quality forged finish Nail Hammer, $1.00 each.

Number 0, 16 ounce Ball Pein Hammers, 95 cents each.

Number 1, 20 ounce Ball Pein Hammers, $1.05 each.

Number 2, 24 ounce Ball Pein Hammers, $1.10 each.

Number 2, Machinists' Riveting Hammers, 90 cents each.

In this regard it may be interesting to know that the above prices are considerably lower than prices quoted in the Civil War times for similar hammers.

Yours very truly,

Vaughan & Bushnell Manufacturing Company.

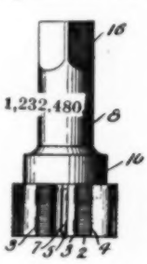
Irving S. Kemp

Sales Manager.

Chicago, July 14, 1917.

TAP IS PATENTED.

Rollin S. Bascom, Greenfield, Massachusetts, assignor to the Greenfield Tap and Die Corporation, Greenfield, Massachusetts, has obtained United States patent rights, under number 1,232,480, for a tap described herewith:



In a revoluble cutting tool, the combination comprising a shank, a split annular cutting member disposed on said shank, and means of connection between said member and said shank disposed adjacent to said split, and rearwardly thereof with respect to the direction of rotation.

A Philadelphia belle has married a man named Hugg, but that is no sign that she will be in the hospital half the time with her ribs fractured.—Houston Post.

MISSISSIPPI AND LOUISIANA HARDWARE DEALERS IN ANNUAL CONVENTION.

The Eleventh Annual Convention of the Mississippi and Louisiana Retail Hardware Associations was held in New Orleans, Louisiana, on Tuesday and Wednesday, July 17th and 18th, at the Hotel Grunewald.

Newspaper advertising and insurance were the topics of the day at the opening meetings, and both were brought up, not in set speeches, but the informal discussions following the taking up of the question box, under the leadership of National Secretary M. L. Corey, of Argo, Indiana. The question box consisted of eighty-seven questions, printed in the convention program, and covering the following sixteen topics: Trade building, profitable lines, buying, price and service, selling, profits, cash and credits, collections, competition, jobbers, association, value of trade papers, insurance, legislation general topics, and conventions.

Hamp Williams,
President,
Mississippi Valley Implement and Vehicle Association.

Advertising was discussed under the topic of trade building and its value was told in no uncertain terms by former Senator Hamp Williams of Hot Springs, Arkansas, who runs a string of hardware stores, is city commissioner and member of the School Board of Hot Springs, president of the Mississippi Valley Implement and Vehicle Association, and attending the convention as a guest.

"If you are going to wait for the public to come in and take away your stock at these necessarily advanced prices, you'll wait till doomsday, and no mistake," Mr. Williams declared. "You must tell your public what you have, and the newspapers are far and away the best medium for telling the greatest number.

"Take my own stores, for instance. I advertise my goods specifically; I advertise them by price, and then I advertise them by name, and then I try to follow it up by serving the community. People see my ads in the papers, and then they'll see my name in the news columns, connected with some other story. As an example, whenever some crop in our region is about ready to mature, I send a canvasser of my own around the entire countryside, to look up the condition of the crop—say sorghum—and he makes his report to me. Then I figure out the probable amount and probable value of that crop, and give that to the newspapers, which are glad to get it because it is news.

"Now people will see my ad, and then in another column they'll see my name in connection with this crop story, or maybe in connection with a school board story, or with a story of some talk I made at a good roads meeting, and they'll put all that together and when they need hardware they'll come to one of my stores.

"Of course, you can't sit in the back room of your store and expect a newspaper to send the customers flocking in to you. Advertising won't make a success of a drone or miser, but it will be a gold mine for a progressive hustler."

In the ensuing discussion it was brought out that every hardware merchant there who advertised in his home newspapers had found that the advertisements had yielded him a substantial profit, which was not true of certain other forms of advertising which were discussed.

The program of Wednesday morning was a continuation of the question box, in charge of L. H. Mayer, of Eunice, Louisiana, and Hamp Williams. In the afternoon session, the convention committees made their reports.

FOREIGN TRADE OPPORTUNITIES ARE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

24868.—A man in Switzerland desires an agency and also to purchase on his own account tools and sundries. A complete list of the articles wanted, with full information, may be had on application to the Bureau or its district offices. References.

24877.—A man in France desires to purchase metallurgists' hardware, glassware, porcelain, etc. Correspondence must be in French.

24887.—Agencies are desired by a firm in Brazil for electrical supplies, hardware etc. Correspondence may be in English. References.

24895.—An inquiry has been received from a man in Cuba who wishes to be placed in communication with American manufacturers of hardware, etc. References.

24897.—An official of a government department in East Africa wishes to purchase carpenters' tools; blacksmiths' tools; paints, brushes, and similar supplies; all lines of builders' hardware; locks and padlocks, etc. Catalogues and trade literature should be submitted showing prices and discounts.

24913.—Catalogues and price lists are requested by a man in Italy for electric heating and cooking stoves and other electrical specialties.

WAR AND AFTER THE WAR PROBLEMS

By Fayette R. Plumb, President American Hardware Manufacturers' Association.

Probably one of the most important addresses delivered at the recent convention of the National Retail Hardware Association in St. Louis was that of Fayette R. Plumb, President of the American Hardware Manufacturers' Association. Mr. Plumb had as his subject the most timely topic of the day, "War and After the War Problems," and his remarks were listened to with unusual interest. He pointed out how each and every one in the hardware trade is vitally concerned in the developments of the war and in the situations that are likely to arise after its close, and concluded by giving helpful information regarding the conduct of the dealer's business in these unprecedented times:

WAR AND AFTER THE WAR PROBLEMS.

Present conditions are such as to destroy all business precedents. Ordinarily I would expect to come to a gathering such as this to ask you for your opinions about business conditions and the prospects for the future.

Conditions brought about by the war, however, are such that the manufacturer sees what is going on before the retailer. The demand from abroad for the raw materials entering into the manufacture of hardware and for the products of many of the factories is creating a scarcity and is bringing about price advances with which the manufacturer comes into touch long before they reach the retail trade. We know that prosperity in this country springs generally from abundant crops sold at fair prices. This creates a demand which spreads through the retailer and the jobber to the factory. The demand from Europe during the last two years has, however, been just the reverse. It has been upon the manufacturer direct. Instead of the manufacturer getting the prosperity which overflowed from the top of the barrel after the retailer and jobber had been filled up, he has drawn his from the bung hole. The necessity of Europe has brought about our prosperity. The condition which has prevailed within the last two years is intensified by our own entry into war. This is my excuse for presuming to accept the invitation of your secretary to address you on "War and After the War Problems."

I cannot tell you much about after the war problems. If the war should cease soon there is no doubt that there would be a temporary financial hesitation, but believe this would be followed by an even increased activity, because, in spite of all that we hear about the great efficiency of the nations at war, their industrial organization for peace is entirely disorganized and we ourselves know too much about the difficulty there is in starting a new factory even under normal conditions to believe that the European nations could turn their productions back into the ordinary commercial channels for a considerable period, which probably would be years, instead of months. The June issue of *System* has an article by Lord Airdale, the great ironmaster of England, in which he says:

Need for Maximum Productive Capacity.

"It is essential for you to have your productive capacity screwed up to the limit. For I believe that your greatest service will be given after the declaration of peace. I should say you ought to prepare yourselves, to the best of your ability, for the task of recreating Europe.

"You are not harassed to the same extent by our labor conditions; you will be in a very good position to take advantage of the big opportunities that will naturally arise for the work of reconstruction in France, Belgium, Russia (including Poland), Serbia and Roumania.

"It is a mistake to imagine that Great Britain and the other belligerents will be in a position to do enormous work of this sort. In the first place, it is likely we shall all be retaining very large standing armies which will deplete our man power. In the second place, we shall still be suffering from the immense numbers of men lost, maimed or otherwise incapacitated for full activity. In the third place, we shall be taken up, every one of us, for years, with getting even with the necessary maintenance work, which we have shelved for three years."

The immediate necessity for rebuilding Europe and for satisfying the urgent peace necessities of the millions of men released from the armies would create a tremendous demand. We must realize that these millions of men who have been supported during the war by the Government would be returning to such homes as were left and starting up housekeeping anew.

Day of Reckoning Must Be Postponed.

During the war we can, of course, export only to the allied and neutral countries and our exports are limited by the carrying capacity of such vessels as can dodge the submarines. If the war should cease soon the world could use to carry our exports not only the present carrying capacity—unmolested by the submarines—but also thelarge amount of German and Austrian carrying capacity now locked up in their own harbors, or interned in neutral harbors. In a word, therefore, I believe that if the war should stop within a few months we would see a temporary financial hesitation such as occurred at the outbreak of the European war, while people were waiting to see what was going to happen; but that this hesitation would not last long and that it would be followed by a period of exports even greater than those we have had in the last two years. Of course, in the end the war will have to be paid for, but the day of reckoning must be postponed till the necessities of the world are supplied. You know that the depression after the Civil War did not come till 1873.

As a matter of fact, however, I do not believe it is worth while to talk about what is going to happen after the war, because I do not believe there is any advantage in looking that far ahead. If anyone is laying his course on the assumption that the war will last only a few months, he had better change it. My own personal opinion is that the war will last for at least two years, and I should be less surprised to see it last four years than to be over in less than two. There is no use giving the reasons why I think this, because you have all discussed the duration of the war so frequently that nothing I say is likely to alter your opinion, but, nevertheless, you might be interested in the following extracts from a report issued by the Executive Committee of the Chamber of Commerce of the United States. It says:

United States Decisive Factor in the War.

"There is the strongest reasons for believing that the United States will prove to be the decisive factor in the great war. The best judges are of the opinion that the submarines will not end the war; that the food shortage will not end the war; that the present colossal conflict on the western front may not end the war. With France past her maximum of men, with England rapidly approaching her maximum and with Germany perhaps still some distance to go before her maximum is reached, it stands to reason that this country must prepare quickly to supply not only food, ships, and munitions, and materials of war, but trained effectives in huge numbers, perhaps in millions.

"Aside from the question of shortening the war, there are life-and-death reasons why the United States should speed preparations for the great conflict. There are possible and even probable contingencies which may cause the United States to bear the brunt of the fighting on her own shores:

"If Russia should collapse.

"If the British fleet should be overcome.

"If the food situation should bring our Allies to their knees.

"If great reversals should be met on the western front.

"If the submarine menace be not checked.

"The impossible has happened so often in this war that any one of these contingencies is not impossible.

Crisis Approaching.

"Present conditions indicate clearly that a great crisis is approaching in the war situation and that it is probable the united efforts of America on a prodigious scale will be called for in the very near future."

These are weighty utterances spoken by the body which represents more truly than any other body the opinions of the united business men of America.

"The failure of the people to realize the gravity of the situation amazed me," said an English publicist, "until I remembered how slowly our own people came to realization."

No Realization of What War Means.

It is a fact that almost nobody in this country realizes what this war does mean. You do not realize it and I do not realize it. Even when I think what it means for this country to send one million men to France and to have as many more in training at home ready to take their places as they become killed or wounded, and when I think that to keep

these men in the field means that at least half the men in the United States will either be in the war or working directly to supply the men who are doing the fighting, I cannot realize what it means. I can figure it out pretty well, but I cannot believe it. It means too great an upheaval in our ordinary life and ordinary way of looking at things.

I presume you all know that the plans of the army are laid for three years at war, and an ultimate army of three million men. It is variously estimated in the different countries at war that it requires the entire work of from five to seven men to keep one man in the field. This means that in addition to the three million men in the fighting force, we would require the work of fifteen million men to keep them supplied and this is nearly three-fourths of all the working men of all ages and kinds in the United States.

Of course, long before we get to this stage, we shall have to call upon the women to help. There is no use shutting our eyes to the fact that within a very short time (which may be within less than a year) every kind of labor which does not help toward winning the war will be cut out, and that we shall have a large number of women replacing men in every industry into which they can be introduced, just as has been the case in each of the European countries at war.

Prices Sure to Rise.

The price of everything is sure to continue to go up. I will not attempt to explain the effect of the inflation caused by the bond issues, of which the present Liberty Loan of two billions of dollars is only the first, except to point out that in addition to spending all the money we can make ourselves, we are spending our children's money. We shall spend not only our income, but we shall mortgage our future.

The Government estimated at the start that the requirements of the first year would be seven billion dollars—approximately two billions to be raised by taxation on the "pay as you go" principle, two billions to be raised by the issues of bonds, which will form a tax on our descendents, and three billions to be loaned to the Allies, but with the provision that the money is to be spent in this country. I see in the papers that they are already talking of making loans to the Allies on a basis of about five billions instead of three billions per year. The army and navy bill passed in May carrying appropriations of over $3,300,000,000 is the largest appropriation bill passed by any legislative body in the history of the world, and carries more money than the entire cost of the Civil War. All the money in all the savings banks of the country is $5,000,000,000. It looks as if we and our Allies were going to spend in the United States in the first year for war over $7,000,000,000—seven thousand million dollars—twice as much as was spent for war by the European countries in the United States during the year 1916, and we all know the change from a condition of financial depression to one of the great over-demand and high prices which the European demand brought about.

When we consider that this demand is to be at least doubled by the entry of the United States into the war and that the ability to supply the demand is to be lessened by the withdrawal of millions of men for the army, we can have some faint conception of the conditions from the industrial standpoint which confront us.

Demand Exceeding Supply.

Certainly there will be no possibility whatever of supplying the demand. This will be especially true in hardware. I think a man could shut his eyes to-day and order anything made from steel by skilled labor and be sure that it would prove a very profitable investment.

We have only to look at the recent advances in all the factors of cost entering into the manufacture of hardware to realize that these advances must be reflected in selling prices which will spread from the manufacturer through the jobber, to the retailer, over a period of a good many months.

Do you know, for instance, that the advances in steel in the last ten months have been more than the entire advance from the outbreak of the European war up to last August? Steel billets which sold a year and a half ago at about $30 a ton cannot be bought now for $100 a ton. High-speed steel which we used to buy for 50c a pound now costs $2.50 a pound. The market price of coal which we used to buy at $1.50 a ton is now $6 per ton at the mines. It is impossible to get Turkish emery which is used in all grinding operations. A poor substitute for Turkish emery can be bought for about twice the price we used to pay for the real article. The paper which we used to wrap around our tools costs us just about three times what it used to cost. Glue has advanced from 15c to 50c per pound.

Scarcity of Labor.

Any of you who do not come from the industrial centers have no knowledge of the scarcity of labor and the prices which have to be paid for it. Cheap, unskilled labor which used to be plentiful at $1.50 a day costs now $3 per day. A manufacturing friend of mine recently saw the pay envelopes of a rivetor who had been working in one of the munitions plants, showing that he had been making $27 per week. Two years ago such a man would make about $18 to $20 per week. Advances such as these represent have been coming faster during the last six months than at any time before. It is just as certain that they will result in higher prices for the retailer as that high-water comes down stream.

It is also just as certain that when the million men who will be under arms by the early fall are withdrawn from industry and when the Government and the Allies' orders are placed at a rate calling for the expenditure of $7,000,000,000 a year, that the factories in many lines will be entirely unable to supply the ordinary demands of their trade. This means that the wise retail hardware dealer will keep his orders in ahead and will carry as large a supply of the staple-quick-moving lines of hardware as he is able to pay for. This is, of course, provided he has the money to pay for it. It is hardly the time to strain your credit, because the war demands may make it necessary for the banks to tighten up on any loans not necessary for the conduct of the war. Still, if you have the money, I should say there is no safer investment than good staple hardware.

Carry Staple, Quick-Moving Lines.

I fully realize how hard it is to carry a sufficient stock now. That even though you are making good money, the increased cost of your stock makes a heavy demand on your capital and that many a prosperous retailer is worse in debt than ever. But the jobber and the manufacturer are in the same boat. So when I say carry a large supply of the staple, quick-moving lines of hardware, I do not mean the odds and ends. On the contrary, this is a time for each merchant to carefully watch his stock to get rid of the head stock and the slow-selling items, and to concentrate his stock into the leading items of each line which command a steady sale. Most especially it is the time to give preference to those lines of hardware where the money has been spent to improve the quality, increase the efficiency, or prolong the life of the article instead of on fancy finishes, which are simply to catch sales, or to please the eye. Of course, this applies to articles of utility, not to objects which might be classed as possessing an artistic value, such as silverware, various forms of builders' hardware, etc.

The point I want to make is that this is no time to waste labor and money on fancy finishes which are not worth anything; and that the retailer who will be in a safe position and who will stand the best chance of making money will be the one who watches his stock very carefully, prunes out all the slow-selling items and carries a good sufficient supply of the leading staple articles for which there is a steady demand.

In doing this, you will eliminate a large part of the detail of your business. You will reduce your overhead and be able to spare some of the clerks that you will surely have to spare for the war. Don't do what we, as a nation, have done. Don't wait for the hour to strike before you get ready. The wise man watches the march of coming events.

If a retailer will get his stock into such shape, I do not think he need worry over any difficulty in selling it at a good profit. We all know that the factories are going to be run at absolutely top speed, so that any hardware needed for industrial plants will have to be bought regardless of the high prices which must be asked for it.

Farmers Favored Class.

We also know that the farmers are going to be the favored class of the nation. I have been told that the average price the Kansas farmer, for instance, received for wheat from 1906 to 1915 was 84c per bushel. I understand that they recently have been agitating a proposition from the Government to guarantee them a minimum price of $2.50 per bushel, and unless the Government sets a maximum price, I should not be surprised to see the farmer get more than this for his wheat.

Of course, the wheat crop promises to be short in spite of the good condition of spring wheat. I notice, however, from the report of the Crop Reporting Board of the Department of Agriculture, that it forecasts an increase in the number of bushels of oats which is equal to the shortage in the wheat crop, and that the outlook for the other grain crops is at least good.

Mr. Hoover, the man who is proposed for the position of food administrator, estimates that we will have to supply 1,000,000,000 bushels of cereals during the next year to our allies. We have never exported more than 500,000,000 bushels. With such a demand, I do not think the farmer need fear that he will not get a good, liberal profit on his crops, and he certainly will have money to spend.

It will take 600,000,000 feet of lumber, costing $18,000,000, just to build the quarters and camp buildings for the troops in the country.

Business to Be More Active Than Ever.

Business is not going along as usual, but is going to be carried on with an activity greater than we have ever experienced. Mr. Vanderlip, president of the National City Bank, recently said: "We are going to see the most intense period of industrial activity which was ever known. It will not be 100 per cent. It will be 125 per cent."

J. Ogden Armour recently said: "I consider the present the most auspicious period from the standpoint of national prosperity in my memory. There is not one good reason why the business of this country should not proceed in its normal course and on ever-increasing lines. There is not

one reason why people should fear for the future or should permit themselves to be swayed from the certainty that they are on a sound financial basis. The per capita wealth of America to-day is greater than ever before—greater than that of the people of any nation at any time in the past or in the present. Our national wealth is past the wildest dreams of a few years back."

Those of us who stay at home and benefit by this prosperity must contribute in the only way that we can. The Government is going to require unheard of sums of money. We must not complain if our taxes are heavy and we must do at least our little bit by loaning every penny we can to the Government when it asks for it as it is now doing in subscriptions for the Liberty loan. This war cannot be carried on by a few. It will require the full effort of every one of us—it will require great sacrifices, but there will be boundless business opportunities for the man with the energy, the courage and the foresight to take advantage of them. With a brave heart, a high resolve and keen mind we can hand down to our children a heritage not only of glory and honor but of comfort.

HARDWARE GUILD OF CINCINNATI HAVE BIG DAY AT ANNUAL OUTING.

Determined to have a splendid time at their Annual Outing at Arcade Camp, Terrace Park, Ohio, on Thursday, July 12th, the Hardware Guild of Cincinnati ordered an ideal day, full of sunshine and happiness, which was delivered promptly on time. The sun came out brightly on schedule, and over one hundred members and friends, including the Hardware Club and Sheet Metal Association men, who were also invited, assembled at Peebles Corner in Cincinnati, at 9 a. m., and were taken to the Camp in automobiles.

Cincinnati Hardware Guild and Friends at Annual Outing.

Here they found a big bunch with plenty of liquid refreshments, and the day was very enjoyably spent in playing ball, racing, swimming and other sports. The big feature of the day was the chicken dinner with all its trimmings, and the menu, says Secretary Carl C. Schott, was "dinner, lunch, dinner and lunch the whole day." Evidently the party was not watching the chicken dinner when the accompanying photograph was taken, for instead of the few smiles, all would have had broad grins which meant more than words could tell.

The stars of the day were Joe Bevis of Harrison, Ohio, and "Bill" Belmer, President of the Cincinnati Hardware Club, who provided much amusement with the harmonious melodies rendered by their "sour stomach quartet." "Charlie" Kobmann, "Ferd" Doepke and John Weigel were quite active during the day dodging cameras and baseballs.

WASHING MACHINES AND WOODENWARE IN AUSTRALIA.

Rotary washing machines are not made in Australia, says a bulletin of the Canadian Department of Trade and Commerce. The sale of these machines throughout the Commonwealth is limited, being mostly confined to country districts. In addition to imports from the United States, at least two Canadian manufacturers have been successful in marketing their washing machines in Australia in normal years. Under present abnormal freight rates, the import charges on goods of such bulky character make the landed cost almost prohibitive. An ordinary rotary washer can now be purchased at about £3 10s. ($17.03) retail in Melbourne and Sydney, but formerly this machine was sold at £3 ($14.60). The profit to the dealer is admittedly small.

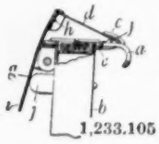
Prior to the war, British makes of mangles, long established on the market, were much favored. More recently some types of United States manufacture, chiefly small sizes, have been imported.

Through persistent effort made by capable representation in Australia, two leading United States manufacturing companies obtain nearly all the orders for clothes wringers. These lines have been on the market for years and dealers have no difficulty in selling them. A comparatively small trade has been done in Canadian wringers, but the manufacturers have not so far adopted the aggressive methods of their competitors to secure larger trade.

One of the principal lines of imported woodenware is wood handles of almost every type. Most of these are obtained from United States manufacturers, although intermittent shipments have been made from Canada. The imports include handles for axes, broad-axes, adzes, hatchets, hammers, picks, shovels, spades and scythes. Hickory handles of good quality are in chief demand for axes, etc. Wood pulleys, through the competition of steel pulleys, are not sold as extensively as in former years. Ordinary wooden clothes pegs are imported, in normal times, in immense quantities. The procedure for the indentor is to sell large quantities—carload lots—to various importers whenever a favorable freight rate can be obtained.

SECURES PATENT FOR SAFETY RAZOR.

William James Myatt, Birmingham, England, has been granted United States patent rights, under number 1,233,105, for a safety razor described herewith:



In a safety razor provided with a detachable blade, the combination comprising a guard, a pair of resilient clips adapted to receive the front edge of the blade, rigid fulcrum pieces on the guard, a hinge clip adapted to engage the rear edge of the blade, a plurality of notches in the said movable clip with any one of which the rear edge of the blade can be engaged, and a spring plunger acting on the hinged clip, substantially as described.

COMING CONVENTIONS.

American Washing Machine Manufacturers' Association, July 25 and 26, at Hotel Sherman, Chicago. Raymond Marsh, Otis Building, Chicago, Secretary.

Tennessee Retail Hardware Association Convention, Chattanooga, August 7, 8, 9, 1917. Walter Harlan, Secretary, 44 Boulevard Circle, Atlanta, Georgia.

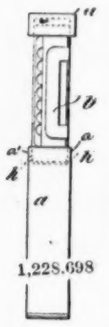
Oklahoma Retail Hardware Association, McAlester, September 5, 6, 1917. W. B. Porch, Secretary, Oklahoma City.

National Association of Automobile Accessory Jobbers, French Lick Springs, Indiana, September 10, 11, 12, 13, 14, 1917. William M. Webster, Commissioner, Chicago.

Kentucky Hardware and Implement Dealers' Association, Louisville, Kentucky, November 13, 14, 15, 16, 1917. J. M. Stone, Secretary, Sturgis.

PATENTS COMBINED HANDLE AND RECEPTACLE FOR SAFETY RAZOR BLADES.

William Edmund O'Reilly, London, England, has obtained United States patent rights, under number 1,228,698, for a combined handle and receptacle for safety razor blades described herewith:



1,228,698: In a device of the class described, the combination with a hollow handle, of a closure for the handle; a member attached to the closure and slidable within the handle; an envelop for spare blades, having means thereon for attaching it to the member slidable within the handle; and attaching means upon the said slidable member co-operating with the like means upon the envelop.

ORIGIN OF WIRE SCREENS.

The origin of wire screens is outlined in an excerpt from the biography of Edwin Gilbert, which reads as follows:

"While plying his trade he conceived the idea of taking the long hair of cattle and horses and weaving it into sieves for the use of housewives to sift meal and flour. He accordingly made a loom on which his wife did the weaving, and with wooden hoops which he made himself, produced the first sieves ever made in the United States.

"They met a popular demand and it was soon necessary to introduce machinery to saw and smooth the hoops. As the demand increased the work was let out to neighbors, and he was able to produce twelve dozen sieves a day, a large business for that period. . . . In 1837 some fine wire had been secured and woven into wire cloth on a carpet loom owned by a neighbor. It was the first wire cloth ever made in America, and suggested to the Gilberts the manufacture of iron sieves.

The manufacture of painted wire cloth for window screens was first begun by this company in 1863. A wire mill was then built, and special machinery added from time to time, largely the inventions of Edwin Gilbert. In 1865 special machinery was introduced for weaving wire cloth on power looms, work which previously had been done by hand."

OBITUARY.

Thomas F. Keating.

After nearly a week's illness, Thomas F. Keating, prominently known in the hardware trade, died of heart failure on Friday, July 13th, in New York City.

Mr. Keating was president of the J. M. Mossman Company, New York City, at the time of his death.

He was born in Pittsburgh seventy-two years ago and his first employment was with John Dunlap, a manufacturer of kitchen and household utensils. In 1869 he entered the employ of the Yale Lock Manufacturing Company, and except for about half a year spent in Boston supervising the time-lock trade of the Company, he traveled for the Company for almost ten years, covering various sections of the United States and Canada.

In 1878 he became manager of the New York office of the Yale & Towne Manufacturing Company, later becoming a stockholder and director. In 1899 he went into business for himself and soon afterwards became associated with the J. M. Mossman Company, first as manager and then as secretary and treasurer, later becoming president.

Mr. Keating was one of the founders of the Hardware Club of New York City. For a long time he was its treasurer and finally president. He was a man of sterling character, highly esteemed by all who knew him in business or social relations.

Daniel Segur

Daniel Segur, secretary and treasurer of the Simmons Hardware Company, Toledo, Ohio, died recently at the age of fifty-eight. His death followed as illness extending over three years, and he leaves a widow and two sons to mourn his loss.

RETAIL HARDWARE DOINGS.

Illinois.

The Forest City Hardware Company, Rockford, has increased its capital from $5,000 to $15,000.

Iowa.

Tom Loman has sold a half interest in his hardware business at New Market to Ralph Westfall.

W. E. Born and Company have purchased the Branch hardware business at Davenport.

E. Hanson, Arlington, has sold his hardware store to Leslie Lehman.

Montana.

Ben Davis has opened a hardware store at Ekalaka.

Harry Francisco has purchased a hardware business at Intake.

Nebraska.

E. Sedgwick has sold his hardware and harness business at Davenport to G. A. Sickels.

M. Herbst has bought the hardware business of Kern and Hahn at Stanton.

Anton Plouzek, Crete, has sold his hardware store to Ed Jelinek.

J. W. Barbee has purchased the G. W. Willey hardware store at Stapleton.

Texas.

The Sheers-Lazenby Company, El Paso, has decreased its capital from $50,000 to $36,000.

Wisconsin.

Frank Conrad and Company will open a hardware store at Fort Atkinson.

Senger and Heller have purchased the Schulze Hardware Company's stock at Portage.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

AUTOMOBILE ACCESSORY JOBBERS TO MEET AT FRENCH LICK SPRINGS SEPTEMBER 10 to 14.

The next meeting of the National Association of Automobile Accessory Jobbers will be held at the French Lick Springs Hotel, French Lick Springs, Indiana, from Monday until Friday, September 10th to 14th, 1917, according to an informal notice which has just been sent out by William M. Webster, Chicago, Commissioner of the Association. A detailed notice will be given later, the informal notice having been sent out so that members may make hotel reservations sufficiently in advance.

ROWE CALK COMPANY PURCHASES THE DIAMOND CHAIN COMPANY

In order to have their own source of supply for the anti-skid chain used in the manufacture of their grip device, the Rowe Calk Company, Hartford, Connecticut, have purchased the Diamond Chain Company, York, Pennsylvania. The latter Company will continue to sell its product in the general market and work has been started on large extensions to the plant at York.

The new officers of the Diamond Chain Company are Samuel M. Horn, president and factory manager; William H. McLaughlin, vice-president; Warren D. Chase, secretary, treasurer and general manager; S. Ralph Horn, assistant secretary, and E. S. Bestor, assistant treasurer, all of whom, with the exception of Samuel M. Horn who developed the business of the Diamond Chain Company, are connected with the Rowe Calk Company.

SUGGESTIONS ON LAYING IN FIRST STOCK OF AUTOMOBILE ACCESSORIES.

Sample lists of automobile accessories have been cataloged by many wholesale firms as a suggestion to the retail hardware merchant, garage proprietor, and other dealers how to lay in a first stock. This is important to do right, because if a wrong line were stocked at the beginning and did not sell, the prospective merchant in motor supplies might get discouraged.

These lists generally contain articles which every automobile owner will call for at some time. Perhaps the advice of several owners of automobiles on the customer list of a hardware merchant would be good. An average may be struck of what those men bought in the previous twelve months, for instance. This would be a good basis to start on. The hardware store always handles a certain line of stuff useful for motorists anyway, such as wrenches, oilers, jacks, etc.

Experience has shown that well advertised goods are sellers, and that it does not pay to stock heavy on freak accessories that will change in fashion. Tires are always needed, yet it takes some thought to pick out the brands to be carried, and care must be taken against too large stocks that might deteriorate in quality if not handled right by the storage department.

Among the necessaries are tire chains, spark plugs, vulcanizers, repair kits for tires, washers, nuts and screws, dry batteries, flash lights, robes and rails, rugs, sponges, chamois, etc. Wholesale hardware houses as a rule have elaborate accessories catalogs and their motoring departments will be glad to suggest the most perfect initial stocks possible to return due profit, local conditions taken into consideration. Generally it is wise to have a line of Ford specialties as the car is in such general use. With these may be linked the supplies for tractors, now coming into wide use.—*Hardware Trade.*

ATTRACTING AUTO TRADE TO YOUR STORE.

Automobiles, motor boats and motorcycles are more widely used each year, and each year is likewise said to witness the increasing popularity of Yankee Tools with motor mechanics, garage men and motorists who make their own repairs. Mechanics and amateurs everywhere regard these tools as among the most efficient ever devised for working around motors, and hence, the manufacturers say, they offer the dealer a good opportunity of commencing an auto tool department and conducting it at a handsome profit.

Motorists and garage men buy a great variety of tools all the time and it is well worth making a special effort to get them coming your way. Display the tools and selling helps in the window and in the store, and boost your auto tool section at every opportunity. Among the Yankee Tools used by motorists are the ratchet tap wrench, chain drill, bench drill, vises, screw drivers, breast drills and hand drills. Full particulars are given in the Yankee Tool Catalog, copies of which can be secured by addressing the North Brothers Manufacturing Company, Philadelphia.

BUSINESS AND PATRIOTISM.

In a modern war, an army is but one of many instruments. Banks are as necessary as forts; shops as trenches; freight cars as gun carriages; merchant ships as dreadnaughts. Real preparedness depends on scientific agriculture, efficient industry, adequate transportation, universal personal thrift, a financial system basing credits on actual trade operations, genuine economy in government. We guard our ideal inheritance only as well as we use our material inheritance. Our patriotism can be no more effective than our business.—Paul Brown.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

Hamblin & Son, dealers in hardware and related lines at Walker, Iowa, for more than forty years, send us a copy of the *Walker News* of July 6 containing their eight-inch double column advertisement which is shown herewith. It is directed to every owner of a potato patch and to everyone who requires oil for machinery or other purposes. If the

writer of the advertisement had said, "Arsenate of Calcium and Lead, for Spraying Potatoes; One Pound to 50 Gallons of Water," or had used some other perfunctory or unappealing copy, as many dealers have a habit of doing, he might have succeeded in arousing a passing interest on the part of the reader, which would not affect sales to any appreciable degree. Obviously, however, he realizes the absolute necessity of *convincing* the reader and hence he uses a very timely heading, and substantiates his advice to spray potatoes with the chemical, citing the recommendation of the Agricultural College at Ames, and other pertinent information, not forgetting the price quotation.

The advertisement is otherwise commendable because of its neat, simple appearance, and the specific price quotations, which leave nothing to the imagination. Bold face type is used with discretion and as a result the typography has little room for improvement. We suggest that in future advertisements the sentence, "Your patronage solicited," be omitted because it is really meaningless. In its place the value of the merchandise and the store's service to customers might be featured.

* * *

Even the insignificant window box gets its innings when it comes to featuring the numerous lines of stock

in the hardware store. With the natural desire in all of us for flowers to beautify our homes, the window box becomes an item of more than passing interest in the spring and summer. In days gone by, any type of an improvised window box was satisfactory, but nowadays we want something that lends beauty to the surroundings, aside from being merely durable. Hence dealers find it profitable to handle metal window boxes, galvanized and painted, which are an ornament to the building, whether it be a dwelling or a business structure. The Fuller & Hiller Hardware Company, Muscatine, Iowa, prepared an attractive advertisement on window boxes, which is reproduced herewith from the original space of two columns by five inches in the *Muscatine Journal*. Notice the novel border used to attract the reader's attention, the emphasis on the important points, and the suggestion at the bottom linking the window display with the newspaper advertisement.

HEATING AND VENTILATING

KEITH FURNACE COMPANY PURCHASES LAND FOR NEW FACTORY.

The Keith Furnace Company, Des Moines, Iowa, manufacturers of the Keith's Monitor and other warm air heaters, have purchased an acre of land at East Twenty-sixth Street and Dean Avenue, Des Moines, on which a new factory will be erected within four years, as the lease on the present site occupied by the Company on Eleventh Street expires at that time. It is planned to erect a four-story factory and a large one-story foundry, which will be of modern, fireproof, daylight type, with all up-to-date conveniences. R. S. Keith is president and founder of the Keith Furnace Company, which was established in January, 1894.

WRITE FOR THIS CATALOG OF SIDE WALL WARM AIR REGISTERS.

The catalog which has recently been issued by the Clo-Mix Company, Elkhart, Indiana, cites in an interesting fashion the many points in favor of their Clover Side Wall Warm Air Registers.

Of first importance are the adjustable and interchangeable features, which are said to make installation a simple yet certain task, and to allow the dealer to fill all demands for either double-headers or single side-wall registers with a minimum stock. The sanitary feature is next dwelt upon and then follows a description of the construction, styles and finishes of the registers.

The catalog also contains information about the Clover Floor Registers, Cold Air Faces and Baseboard Ventilating Grilles, together with lists of capacities and sizes. It is well worth reading, and copies can be obtained by addressing the Clo-Mix Company, Elkhart, Indiana.

HOT AIR VS. HOT WATER.

To American Artisan and Hardware Record:

I wish to install a heating system in my house. I prefer hot air. Which, in your opinion, is the healthiest and best of the two: Hot air or hot water? Is the air from hot water moist or dry?

Very truly yours,
Subscriber.

———, Pennsylvania, July 14, 1917.

Naturally we believe, or rather we know, that a warm air heating system is more healthful, more economical and preferable in practically every way to a hot water system, and our views are substantiated by the leading authorities on heating and ventilation.

The inquiry was referred to Charles Smith of Chicago, the veteran manufacturer of heating apparatus, and he remarked in characteristic fashion, "Yes, the air from hot water is moist, *if the radiator connected to the water supply leaks and the water drips on the floor.*" Otherwise the air in a room heated with hot water is *dry*. In a warm air heating system a water pan or water basin placed properly in the casing will insure an adequate supply of moisture to humidify the air to a healthful degree, and this arrangement is the most conducive to health and comfort that could possibly be devised.

Furthermore, a warm air heating system *ventilates* as well as heats. The rising warm air and the falling cold air keep up a continuous circulation which insures a constant supply of fresh air. In hot water or steam-heated rooms the air is inert unless windows or doors are opened to let in cold air, which obviously means that drafts are set up and the fuel bill is increased.

MISS SYLVIA LEWIS MARRIED TO JOSEPH GOLDBERG OF EXCELSIOR STEEL FURNACE COMPANY.

Mrs. Anna Lewis of Chicago has sent out an announcement to the effect that on Tuesday, July 17th, her daughter Sylvia was married to Joseph Goldberg, who is a salesman of the Excelsior Steel Furnace Company in Chicago and vicinity. Mr. Goldberg is a very pleasant chap and his wife is a very pretty and charming young lady, so that a happy union is assured. Their many friends will join with us in extending heartiest congratulations and best wishes for a lifelong happiness.

VENTILATION FIRST RULE OF HYGIENE.

Noted educators are persistently teaching the people that "Air is the first necessity of life."

"We may live without food for days, and without water for hours; but we cannot live without air more than a few minutes. Our air supply is, therefore, of more importance than our water or food supply, and good ventilation becomes the first rule of hygiene."

Revolutionary demands of domestic housing stipulate that every common householder shall enjoy the benefits of pure, fresh air in winter and in summer and this is made possible by a warm air heating apparatus, properly constructed and properly installed.

J. W. Story, who for the past twelve years has been connected with the Chicago office of the L. J. Mueller Furnace Company, Milwaukee, Wisconsin, has resigned to become vice-president of the Eureka Smokeless Furnace Company, Chicago. The Company has also been enriched by the addition of James T. Ketcham who like Mr. Story, is well known to the trade in Chicago.

Heating and Ventilating Engineers Hold Summer Meeting in Chicago

The Semi-Annual Meeting of the American Society of Heating & Ventilating Engineers for 1917 held its opening session Wednesday morning, July 18th, in the Red Room of the Hotel La Salle, Chicago, Illinois, with President J. Irvine Lyle in the Chair. The proceedings opened by an address of welcome by F. W. Powers, President of the Illinois Chapter, which was responded to by H. G. Issertell.

Reports were made by the different State Chapters.

The report of the Code for Testing Low Pressure Heating Boilers was passed till a later session.

George W. Barr, Chairman of the Committee on Research Bureau, made his report, which evoked considerable discussion.

John F. Hale delivered the report of the Committee on Engineering Co-operation.

Professor John R. Allen delivered the report of the Committee on Standard Method for Testing Radiators and promised a more complete report of a new method of testing for the next annual meeting.

A. E. Stacey read the report for the Committee of the Standard Method for Testing Air Washers.

Frank I. Cooper, who prepared the report on School House Standards, was not present and his report was read by the Secretary.

A Committee was appointed to co-operate with the National District Heating Association, and it was suggested that the next Summer convention be held the third week of June, the same time and place as the annual convention of the National District Heating Association.

On account of the halls of the Society Building in New York being in use the third week in January, the Council was authorized to hold an informal meeting the third week in January in New York City and adjourn till the following week, January 22nd, when the regular convention will open. It being impossible to legally make a change in the Constitution providing for a change before that date, this method was adopted to alter the time of meeting. After the reading of a paper by F. E. McCreary on Hot Water Heating System of the Crane Company Plant, the convention adjourned into the adjoining room where a very bountiful luncheon was served.

Military Session.

In the afternoon the members assembled for the Military Session, at which the government was represented by speakers from the War Department and the Department of Agriculture. Colonel C. S. Richie of the Engineer Corps told how the War Department is working in the national preparedness program, and H. C. Gore outlined the activities of the Department of Agriculture towards that end.

A special feature of this session was the address of Colonel T. E. Powers, D. S. O., Canadian Engineers, on "Experiences at the Front." W. J. Mauer read a timely and interesting paper on the "Heating of Cantonments," which was followed by a paper of "Notes on the Testing of Heating and Ventilating Equipment," conducted by Messrs. Kimball, Lyle and Ohmes.

Dinner and Dance in Evening.

The Dinner and Dance at the handsome Club House of the Chicago Yacht Club on Wednesday evening was a complete success, and as all the arrangements had been made by the Illinois Chapter for the entertainment of the members and guests, many compliments were worthily bestowed on the committee in charge. This is the second time the Society has been entertained under the auspices of the Illinois Chapter, and they certainly conducted it in fine style.

A fleet of automobiles conveyed the party from the Hotel La Salle to the Club House on the lake front. The dinner was a sumptuous repast, and was very well served, the menu being as follows:

Florida Cocktail
Midget Gherkins Queen Olives
Essence of Chicken Bellevue
Broiled Lake Superior Whitefish Sliced Cucumbers
Pattie of Fresh Shrimps Supreme
Breast Capon a la Maryland Potatoes Rissolé
Combination Salad Old-Fashioned Strawberry Shortcake
Nippy Cheese on Toasted Crackers
Demi-Tasse

After the dinner was served, Colonel T. E. Powers, D. S. O. of the Canadian Engineers, who spoke at the afternoon session, interested the party with some reminiscences of action at the front, describing camp life, trench warfare and some personal experiences of the hospital service while in France. Following this the party repaired to the spacious parlors, where dancing was indulged in, music being furnished by a capable orchestra.

THURSDAY, JULY 19.

In the morning the members and their ladies visited the Corwith Plant of the Crane Company and in the afternoon came the "Drying Session." The question of drying is of prime importance at this time in connection with the international food problem and this session consequently proved to be very interesting, many helpful recommendations for the solution of the problem being made in the various addresses and papers.

The program was connected with the reading of a paper on the "Mechanical Curing of Alfalfa" by E. M. Bassler, Engineer of the Bayley Manufacturing Company, Milwaukee, Wisconsin.

F. R. Still of Detroit, Michigan, next read a paper on "Dehydrating Fruits and Vegetables," and after this came a paper on a related topic, "The Preservation of Food Products by Drying," by G. R. Shadwell, Sales Manager of the Improved Appliance Company, Brooklyn, New York.

"The Drying of Fruits and Vegetables" was the subject of the paper read by Walter M. Schwartz,

Engineer of the Philadelphia Textile Machinery Company, Philadelphia, and the last paper was that of H. C. Russell of Washington, D. C., on "Drying Money."

Dinner and Garden Party in Evening.

The second of the big evening entertainment features was held Thursday evening, when the members and their ladies assembled for the Dinner and Garden Party in the Marigold Room of the Bismarck Garden. As on the previous evening, the occasion was ideally conducted and everyone spent a very enjoyable time. Compliments were again showered upon the Illinois Chapter for their splendid arrangements and care in providing the excellent dinner and entertainment.

FRIDAY, JULY 20.

The more active co-operation between the Society and the National District Heating Association in line with the movement for greater effort in the work of technical assistance was exemplified by the "District Heating Session" on Friday morning, July 20th.

The first number on the day's program was an address by D. L. Gaskill, Secretary of the National District Heating Association. This was followed by a paper on "Measurements of Low Pressure Steam Used for Heating" by J. E. Emsweiler, Associate Professor of Mechanical Engineering, University of Michigan. Discussion was then held on the paper which F. E. McCreary presented at the first session Wednesday on the "Hot Water Heating System of the Crane Company Plant."

C. M. Moderwell, Chicago, member of the Fuel Committee of the National Defense Council was to deliver an address on the "Fuel Problem in the United States," but he found it impossible to be present and his paper was read by Dr. S. C. Honwold. The remaining time was given over to discussion on the topics of "Heat Transmission Through Compound Walls" and "Effect of Plenum System of Ventilation Upon Health," and the following papers:

"Ventilation Standards and the Synthetic Air Chart," by Dr. E. V. Hill, Head of Sanitary Bureau, Department of Public Health, Chicago.

"Are Schoolrooms Drier than Deserts?" by George T. Palmer, Chief of Investigating Staff, New York State Commission on Ventilation. In Mr. Palmer's absence his paper was read by J. Irvine Lyle, President of the Society.

J. J. Walsh, Mine Inspector, Tenth Anthracite Inspection District, Wilkes-Barre, Pennsylvania, read the following paper on "Mine Ventilation":

MINE VENTILATION.

The amount of air passing through an ordinary mine is enormous; 200,000 cubic feet per minute is quite common, and, in many of the larger mines, it reaches 500,000 cubic feet per minute. The reasons for requiring such large volumes of air are: *first*, to supply those employed in the mine with sufficient oxygen to support life, and *second*, to prevent the accumulation of fire damp.

Other agencies tending to vitiate the air of a mine are constantly in action, among which may be mentioned the burning of lights and the gases generated by blasting, and aside from this, carbon dioxide is escaping continuously from the pores of the coal as chambers and gangways are being driven. In connection with this, carbon dioxide is also formed by the action of the oxygen of the air on the carbon of the coal and timber; when carbon dioxide is formed in this way oxygen is taken from the air, the amount so taken being equal to the carbon dioxide produced. There is still a further loss in the oxygen content of the air passing through a mine by reason of the coal absorbing it.

With all the foregoing causes and conditions tending to vitiate the air current of a mine, the oxygen content seldom falls below 20 per cent, and the carbon dioxide rarely goes above 0.4 percent.

The influence of water vapor in the air of a mine, or in a crowded room for that matter, presents a condition in itself requiring thorough ventilation.

The wet-bulb temperature is of direct hygienic importance when it is much above 60 degrees Fahrenheit. In warm mines, the wet-bulb temperature is of great importance and influences to a vast extent, not only the amount of work that can be performed, but the health of the worker.

Experiment has been conducted by confining several persons in a closed chamber until the oxygen content of the air fell to about 16 percent and the carbon dioxide increased to over 4 percent. At the same time the temperature of the enclosed air rose to 84 degrees Fahrenheit, wet-bulb. The discomfort felt by those confined was relieved by starting an electric fan within, indicating that it was not the low oxygen or excess of carbon dioxide that caused the discomfort; it was the stagnant bodily heat. Relief was not obtained by one confined when breathing through a tube the pure air outside the chamber, nor was discomfort felt by one who, outside the chamber, breathed through a tube the impure air within.

When one considers the conditions making it necessary to ventilate a mine, and that the weight of the air passing through an ordinary mine in a year will exceed four million tons, the necessity for the proper construction of the airways through which this air must pass, together with a correctly proportioned fan, is apparent. The fans in use in the anthracite coal fields of Pennsylvania vary in size from 5 to 35 feet, operated by engines ranging from 20 to 250 horsepower and generating water gauge pressures from 0.5 to 5 inches.

It had been the custom with the mine operator in the past, when ordering a ventilating fan, to furnish the fan manufacturer with certain dimensions, and the water gauge pressure against which the fan must act, in many cases the dimensions and water gauge so furnished being a duplicate of a fan already in operation at a mine and by means of which a large quantity of air is obtained; the purchaser believed that a fan furnishing a large quantity of air for one mine will do equally as well if put in operation at another mine, when, as a matter of fact, each mine might require a fan having entirely different dimensions and water gauges.

In order to design and proportion a ventilating fan for the purpose of circulating a certain quantity of air through a mine per minute, it is necessary to know what pressure will be required to produce the desired velocity. At one mine a water gauge of 2 inches may produce 200,000 cubic feet of air per minute, while at another mine the condition of the air-ways may be such that it would require a 6 inch water gauge to deliver the same quantity. If the diameters of the fans are the same, the fan producing the 6 inch gauge will need to run faster in order that there may be sufficient rim speed to produce the higher gauge, and its width must be narrower, if it is desired that both fans show the same volume ratio.

If the manufacturers of ventilating fans were more exact in their inquiry regarding the water gauge required for the ventilation of mines, there would be fewer good fans condemned.

Location of Fans.

It frequently happens that the ventilating equipment at a mine cannot produce a sufficient volume of air, and to remedy this difficulty a second fan is installed and the two connected to the same upcast shaft. An auxiliary fan so located is of little practical value, the only advantage obtained from an additional fan placed in this manner is a saving of part of the pressure consumed in the fan drift and fan when one fan operated alone, a saving entirely too small to warrant the erection of the second fan.

If an exhaust fan, while ventilating a mine, produces a difference in pressure between the top of the intake shaft and the top of the return shaft equal to a 2 inch water gauge or 10.4 pounds per square foot, a certain quantity of air will be forced into the downcast shaft and through the mine working to the fan, and under similar conditions of humidity, temperature and resistance, the quantity will not increase or decrease. Now, suppose an additional fan is connected to the top of the same upcast shaft and both are run at a speed sufficient to generate a 2 inch water gauge, no advantage in pressure is obtained; the same difference in pressure that existed, namely, 10.4 pounds per square foot, when one fan operated alone still exists when both are running together. As stated before, the only advantage obtained in operating two fans in this manner is the slight saving in pressure in the fan drift and the fans.

In all cases, however, where two fans are connected to a common upcast shaft, and receive their air through it, the rim speed of each should be such that the water gauges are equal; if this is not strictly observed, the volumetric efficiency of the fan having the smaller gauge may be reduced to unity. In fact, if the difference in the gauge readings is great, the fan having the larger gauge may obtain some of its air supply through the chimney of the other fan.

Booster Fans.

Booster fans are fans located under ground between the intake and return, or, at any point in the intake or return, to help along a feeble air current. A condition requiring their use in mines exists where the movement of the air is broadcast, and where much of the air produced by the surface fan is lost by leakage. A booster fan, placed in a mine for the purpose of assisting a fan located on the surface, will not increase the total quantity of air delivered by the surface fan unless it generates a greater pressure than that already generated by the surface fan; neither will it be of any local value unless it generates a pressure greater than that existing at the point of installation. The extent to which a vacuum is approached by a booster fan, installed for the purpose of assisting a surface fan, should be such that the air will more readily flow to it than take any other route that might be offered by reason of leakage or other cause.

For the purpose of increasing the volume of air in a mine, fans are sometimes placed in tandem; the increase in volume obtained by this method, however, does not warrant the expenditure. Fans placed in tandem, one at the top of the upcast shaft exhausting, and the other at the top of the downcast shaft blowing, are of little value to each other. Assume that an exhaust fan having certain dimensions is operating at a mine and producing a 2 inch water gauge, and that, while so working, a certain volume of air is entering the downcast shaft at a certain velocity; if a force fan be now placed at the top of the downcast shaft and run at a speed sufficient to produce, say a 0.5 inch water gauge, it will not assist the exhaust fan, because the power already in the moving air, so caused by the exhaust fan running at a speed sufficient to generate a 2 inch water gauge, is far greater than that produced by the blowing fan. If the blowing fan be now run at a speed sufficient to produce a 2 inch water gauge, it is then only capable of producing a velocity in the downcast shaft slightly greater than that already existing.

If the rim speed of the blowing fan is further increased until the water gauge reading is 3 inch, while the exhaust fan remains as formerly, producing a 2 inch water gauge, it will be found that the velocity of the air is increased, and this increase is entirely maintained by the blowing fan, because the velocity in the air is greater than that which the exhaust fan, with its 2 inch water gauge pressure is capable of producing.

In order to obtain the greatest efficiency and saving in horse power, each fan should have an independent intake and return. With fans installed in this manner, the quantity of air can be doubled with twice the horse power, while, with fans working in tandem, or, while operating on, and receiving their air through the same intake and return, it will require about eight times the horse power to double the quantity.

Design of Fan Capacity.

The question might now be asked, how to determine the pressure that will be necessary to circulate a given quantity of air through a mine. It would be a very difficult and tedious task to calculate the pressure consumed in all the different airways, shafts and chambers throughout an entire mine; however, from actual trial, it is found that this is not necessary in order to obtain practicable results.

If a mine is already being ventilated by a fan and it is desired to replace this fan by one having a larger capacity, the pressure required to produce the larger volume can be calculated by means of the known facts, namely:—The pressure and volume produced by the fan already in operation and the desired new volume; $(p : p : : q^2 : q^2)$.

If, however, the case is one where a fan is to be installed for the first time, further calculation is necessary. The airways of an ordinary mine may be divided into three classes, namely:

First, main splits, or those through which the whole volume of air passes;

Second, primary splits, or those that branch off the main split;

Third, secondary splits, or those that branch off primary splits.

It has been found by calculation and experiment that in the average anthracite mine about 85 percent of the ventilating pressure is consumed in the main splits and the primary splits, and that where the air flows broadcast, the pressure consumed is hardly appreciable. Therefore, when calculating the pressure that will be required to force a certain volume of air through a mine it will only be necessary to calculate for the main splits and the primary split airways.

The value of the results obtained in this way will, however, depend on the co-efficient used. The co-efficient is a very uncertain quantity and will vary greatly for different mines. The writer has found by many trials that the proper co-efficient for the average anthracite mine is 0.000000005, and the results obtained by the use of this co-efficient more nearly agree with those actually produced when a fan is put in operation.

The other papers on the program were as follows:

"A Study in Air Measurements and Air Flow," by A. K. Ohmes, New York City, First Vice-President of the Society.

"The Friction of Water in Iron Pipes and Elbows," by F. E. Giesecke, Austin, Texas.

"Warm Air Furnace Heating," by I. F. Grumbein, Philadelphia.

"Operation of Diaphragm Radiator Valves, Thermostatically Controlled," by F. A. DeBoos.

"Use of Refrigeration in Air Conditioning," by L. Nusbaum.

The final number was a discussion of the topic "Reduction of Flow of Air Through Screens."

FIREPOT IS HEART OF WARM AIR HEATER.

A warm air heater is built around the firepot. A warm air heater with a poor or inefficient firepot is like a person with a weak heart. Just as a person with a weak heart is either short lived or frequently needs a doctor, so a warm air heater with a poor firepot is short-lived and frequently needs repair. Hence in building a warm air heater, it is necessary to construct a firepot on correct scientific principles, and these principles, it is said, have been successfully embodied in the firepot of the XXth Century Warm Air Heater, which is shown in the accompanying illustration. This firepot is corrugated, with air cells and slots in the wall, and is said to be self cleaning: The ashes continually sift through these cells into the ash-pit, with the result that bright, redhot coals come in contact with the firepot, giving greatly-increased heating efficiency. The construction of the various parts of the heater is interestingly set forth in the catalog which was recently issued. Copies can be secured by addressing the XXth Century Heating and Ventilating Company, Akron, Ohio.

XXth Century Warm Air Heater, Showing Corrugated Firepot.

SUGGESTIONS THAT MAKE WORK EASY FOR THE SALESMAN.

Cheerfulness.

I believe a cheerful, smiling disposition, both in approaching the prospect and during the talk, adds a very large percent to the chances of making a sale. Therefore be cheerful.

Confidence.

Confidence in yourself, in giving the prospect the best opportunity to buy that he has ever had or ever will have, and confidence in your ability to sell him.

Health.

I confidently believe that this is one of the very important elements of success in selling, because when one goes to sell something he ought to feel at his very best.

PRACTICAL HELPS FOR THE TINSMITH

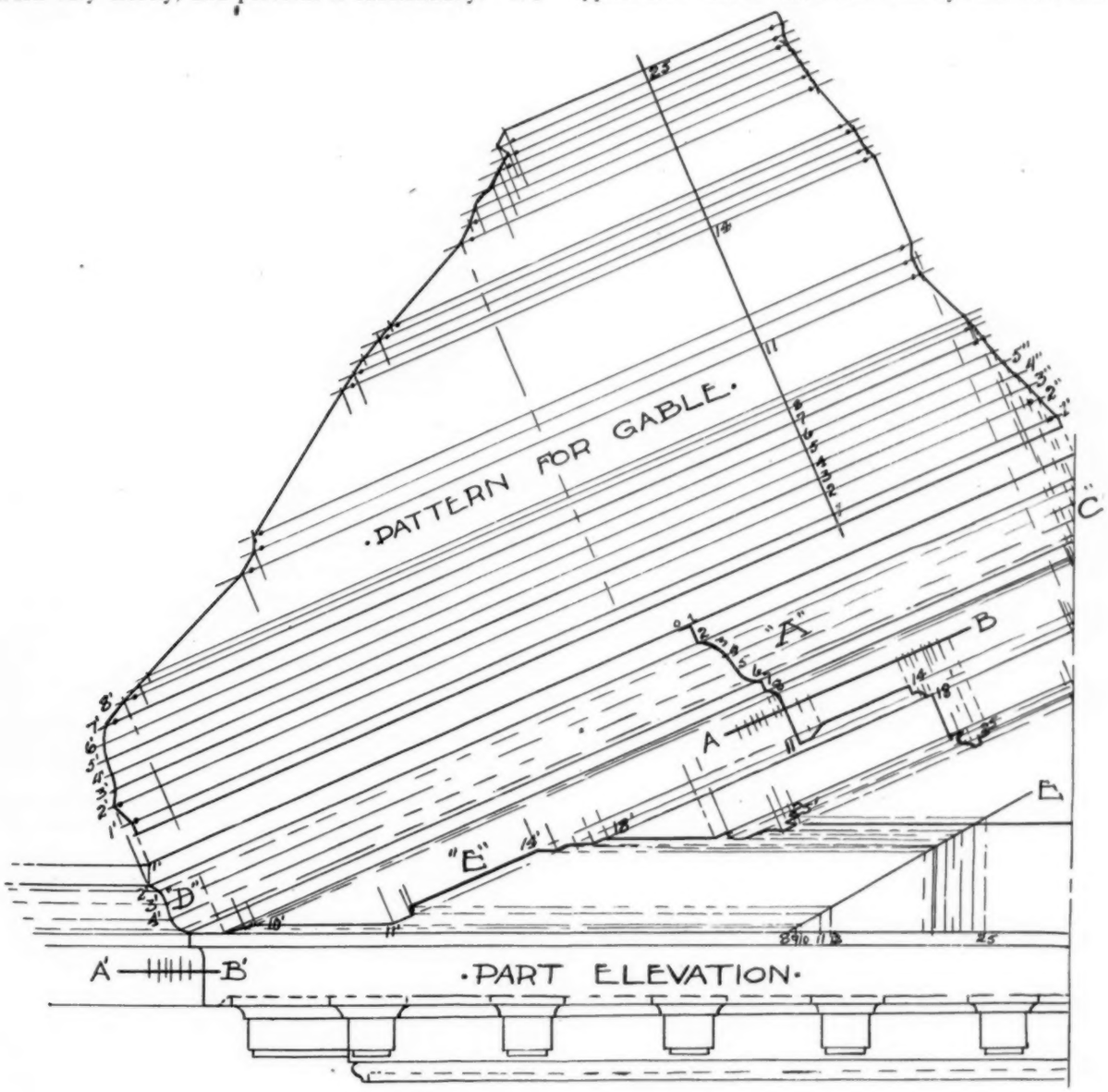
PATTERNS FOR PEDIMENT MITERING ON A PITCHED CORNICE COVER NG.

BY O. W. KOTHE.

Now that Sheet Metal Cornice work is coming back again, it is necessary to keep our eye on this beautiful work very closely, and perform it substantially. We learn that Terra Cotta is losing out; it is not giving the satisfaction that was expected of it, and consequently good galvanized iron and copper are being used more frequently.

The wave is sweeping from the East to the West. Architects are taking no chances any more with inferior Workmanship. They have learned their lessons and we trust the Sheet Metal man will profit by it. So you can bank on it that the Architect will see that all seams are properly riveted and everything is soldered securely and the work is erected rigid, straight and smooth.

The field of Sheet Metal Cornice work is larger today than it ever was. There are more places for its application. Sheet Metal men who by their own confidence are "getting by" somehow and refuse to make a detailed study of Cornice work, will certainly lose out. In this they will never know what they lose until they see a friend or two working on better work than they are, with greater favor bestowed on them, good will as well as financial recompense.



Development of Patterns for Pediment Mitering on Pitched Cornice Covering.

So we have a problem where a pediment rakes out of the horizontal return, the Ogee following its way

into the gable, while the rest of it is cut on the wash line, called Cornice Cover. The main feat is to establish the miter line "E."

For this, first draw your pitch line of gable and then detail your cornice "A"; dividing all curved lines in a convenient number of spaces, and project them to the line A-B. At some convenient place draw a line as A'-B'. With dividers, pick the points of the upper fillet, the ogee, and the lower fillet from the line A-B, and step them off on this line A'-B'. Square up lines, thus intersecting points from the section "A." This gives you the miter line "B."

Note the fillet 7-8 miters on the edge of the horizontal cornice, and from this point the cornice covering starts; the pitch is shown as 8-E. Pick all the spaces on the line A-B from 8 to 25 and set them on the horizontal line 8-25. Erect lines from these points to the roof line 8-E. From these points square over lines cutting those projected from the section "A" as in points 9'-10'-11', etc., to 25' which gives you the miter line "E."

Note that this gable will have a double cut, one on a slant and one upward as it goes backward. Next set the pattern out by picking the stretchout from "A" and setting it off on the line 1-25. When stretchout lines are drawn, project lines at right angles to pitch line from the miter "C," "D" and "E" and extend them into stretchout, thus cutting lines having similar number. This gives you the net pattern. Edges for soldering must be allowed extra.

MILWAUKEE SHEET METAL CONTRACTORS DISCUSS PLANS FOR NEXT NATIONAL CONVENTION.

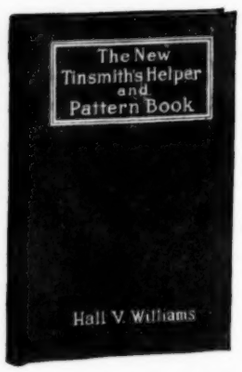
Plans for making the 1918 convention of the National Association of Sheet Metal Contractors the most memorable one ever held were enthusiastically discussed at the regular monthly meeting of the Master Sheet Metal Contractors' Association of Milwaukee, Wisconsin, in which city the convention is to take place. It was moved that the president appoint a committee to get together and commence work immediately. They are to do everything possible to have the entire sheet metal trade of the United States know that Milwaukee is an ideal place for a national convention and before long a propaganda will be started with this end in view. The convention committee appointed by President John Bogenberger consists of the following: Paul L. Biersach, Chairman; O. A. Hoffman, William Gallun, Louis Hoffman, J. M. Hollitz, R. Jeske, A. M. Smith, Henry Pluckhan, Frank Romberger, and E. B. Tonnsen.

The meeting was well attended, eighteen firms being represented. Mr. Hollitz of the Furnace Committee reported that the new rules of warm air heater installation were acceptable, following which W. A. Nibble was unanimously elected to membership in the Association. Paul L. Biersach, secretary of the state association, explained the work done at the national convention in Cleveland, and R. Jeske reported the meeting of the Board of Directors of the state association, including their recommendation that better fellowship would be created if the locals of the various cities would attend each other's meetings, which course was agreed upon by the Milwaukee members.

Motions were made to raise the dues from six to eight dollars and to collect the dues on January 1st hereafter instead of July 1st. It was also decided to write to Secretary J. P. Miller, Municipal Building, New York City, for copies of the Building Laws, which pertain to the sheet metal trade. The Picnic Committee reported that the annual picnic will be held August 15th, the place to be decided upon later.

NEW EDITION OF TINSMITH'S HELPER AND PATTERN BOOK ISSUED.

A new edition of one of the most popular books on tinsmithing and elementary sheet metal work has just been issued. For years "The Tinsmith's Helper and Pattern Book" by Hall V. Williams, has been used in many shops throughout the country because it clearly explains the elements of pattern drafting and shows how the rules of mensuration are applied to problems which come up daily; and the new edition of this book is an outgrowth of that practical guide.



At first it was intended to merely revise the old edition, but in order to cover the ground, an entirely new treatment of the subject was found necessary—hence the New Helper is new with the exception of the chapter on Mensuration, which has been rearranged and amplified, and some fifty pages of problems and tables.

The present work contains 360 pages and 92 tables as against 124 pages and 24 tables in the former work, the additional matter covering simple geometry and every phase of modern pattern cutting, from the making of every type of seam, lap and joint, to conical problems and tinware, elbows, piping, ducts, gutters, leaders, cornice and skylight work and warm air heater fittings. The use of triangulation in the development of pattern problems is simply explained and information on tin roofing, corrugated iron work, metal shingles, etc., is also included.

The ten chapters of helpful text and illustrative matter are supplemented by a chapter on handy recipes and formulas and by a chapter of tables which contains practically all the data the sheet metal worker requires. Without question this handy little volume will serve splendidly as a complete text book and guide for the apprentice or trade school student, as well as an up-to-date reference book for the mechanic and shop foreman.

It is published by the U. P. C. Book Company and copies can be secured at $2.00, postpaid, from the Book Department of AMERICAN ARTISAN, 910 South Michigan Avenue, Chicago.

The Time to Advertise is when you have something salable to sell, the courage to advertise right, and a competent advertising man to handle the business.

BRAY BILL ON INDUSTRIAL EDUCATION PASSED IN WISCONSIN LEGISLATURE.

The persistent efforts of Frank L. Glynn, Secretary of the Wisconsin State Board of Industrial Education, to promote vocational training in that state, have been crowned with success. At a recent session of the legislature a bill introduced by Senator William Bray of Oshkosh was passed, which concerns itself with the administration of industrial education of the state, and is outlined in the following. Another great victory was won in the passage of the bill providing the extension of attendance from four hours to eight hours weekly for the Milwaukee Continuation Schools. This was introduced by Senator Roy Wilcox, Eau Claire, and will be published in an early issue.

BRAY BILL ON ADMINISTRATION OF INDUSTRIAL EDUCATION.

Section 553, p-1. 1. There is hereby created a state board of industrial education. The board shall consist of nine appointive members to be appointed by the governor, three of whom shall be employers of labor, three of whom shall be skilled employees other than those who have employing and discharging power, and three of whom shall be practical farmers. The state superintendent of education and a member of the industrial commission to be selected by the commission shall be ex-officio members of this board. A majority of said board shall constitute a quorum.

Personnel of Board.

2. In the first appointments the governor shall designate three members to serve for two years, three members to serve for four years, and three members to serve for six years, from the first day of July of the year in which the appointments are made. Each such group of three members shall consist of one employer, one employee and one farmer. All appointments thereafter shall be for six years except appointments to fill vacancies, which shall be for the unexpired portion of the term.

Powers.

3. Said board: (1) Shall have control over all state aid given under section 553p-1 to 553p-15, inclusive, and section 20.33, of the statutes; (2) shall meet quarterly and at such other times as may be found necessary; (3) shall elect its own officers; (4) shall report biennially; (5) may employ a director of vocational education and assistants for the development and supervision of the work of industrial education provided for in this act, and all accounts for such salaries shall be certified by the secretary of said board to the secretary of state; (6) shall inaugurate and determine the organization, plans, scope and development of industrial education in the State.

Co-operation with Federal Board of Vocational Education.

4. The provisions of the Act of Congress, approved February 23, 1917 (Public No. 347, 64th Congress), entitled "An Act to provide for the promotion of vocational education; to provide for co-operation with the states in the promotion of such education in agriculture and the trades and industries; to provide for co-operation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure," are hereby accepted. The State Board of Industrial Education is designated as the board for the State of Wisconsin to co-operate with the Federal Board of Vocational Education in the execution of the provisions of the United States act, and is hereby empowered with full authority so to co-operate. The state treasurer is hereby designated custodian of all funds allotted to this state from the appropriations made by said act, and he shall receive and provide for the proper custody and disbursement of the same in accordance with said act.

Vocational Schools.

Section 553p-2. 1. Schools created under sections 553p-1 to 553p-15, inclusive, shall be known as vocational schools. The laws relating to agricultural schools and the Platteville mining trade school shall remain unaffected by said sections.

Filling of Positions.

2. All positions except that of director of vocational education shall be filled by civil service examination as provided by sections 990-1 to 990-32, inclusive.

Local Boards.

Section 553p-3. 1. In every town, village or city of over five thousand inhabitants there shall be, and in towns, cities and villages of less than five thousand inhabitants there may be a local board of industrial education, whose duty it shall be to establish, foster and maintain schools for instruction in trades and industries, commerce and household arts in part-time-day, all-day and evening classes and such other branches as are enumerated in subsection 1 of section 553p-5 of the statutes. Said board may take over and maintain in the manner provided in sections 553p-1 to 553p-15, inclusive, any existing schools of similar nature.

Personnel.

2. Such board shall consist of the city superintendent of schools ex officio or the principal of the high school ex officio, if there be no city superintendent, of the president or chairman of the local board charged with the supervision of the schools in case there be neither of the above mentioned officers, and four other members, two employers and two employes, who shall be appointed by the local board charged with the supervision of the schools and who shall serve without pay.

Term.

3. The term of the appointive members of the local boards of industrial education shall be two years from the first of January of the year in which they are appointed; provided, however, that in the first appointment two members shall be appointed who are to serve for only one year from the first of January of the year in which they are appointed. All subsequent appointments shall be for two years, except appointments to fill vacancies, which shall be for the unexpired portion of the term.

Supervision.

4. The local board of industrial education shall elect its officers from its membership, a chairman and a secretary. The local boards of industrial education, with the cooperation of the state board of industrial education, shall have general supervision of the instruction in the local schools created under sections 553p-1 to 553p-15, inclusive.

State Aid.

5. No state aid shall be granted to schools created under sections 553p-1 to 553p-15, inclusive, without the approval of the local board of industrial education. No money appropriated by the city, town or village of these schools shall be spent without the approval of the local board of industrial education.

Teachers.

6. The teachers in the schools created under sections 553p-1 to 553p-15, inclusive, shall be employed and their qualifications determined by the local board of industrial education.

Powers of Board.

7. This board shall have power to purchase all machinery, tools and supplies, and purchase or lease suitable grounds or buildings for the use of the schools under its supervision. Existing school buildings and equipment shall be used as far as practicable.

University Instruction.

8. The board is empowered to make contracts with the extension division of the University of Wisconsin to give instruction in such branches as the department may offer, when in the judgment of the local board such instruction can be secured to better advantage than by local provision.

Establishment of Schools.

9. Whenever twenty-five persons qualified to attend an industrial, commercial, continuation (or evening) school file a petition therefor with the local board of industrial education the board shall establish such school or schools or provide other facilities as authorized in sections 553p-1 to 553p-15, inclusive.

Expenses.

(Section 553p-4.) 1. The local board of industrial education of every city, village or town shall report to the common council, or in case of cities having commission form of government to the commission, or to the village or town clerk at or before the first day of September in each year, the amount of money required for the next fiscal year for the support of all the schools established or to be established under sections 553p-1 to 553p-15, inclusive, in said city, village or town, and for the purchase of necessary additions to school sites, building operations, fixtures and supplies.

Taxes.

2. There shall be levied and collected in every city, village or town, subject to taxation under sections 553p-1 to 553p-15, inclusive, a tax upon all taxable property in said city, village or town, at the same time and in the same manner as other taxes are levied and collected by law, which together with the other funds provided by law and placed at the disposal of said city, village or town for the same purpose, shall be equal to the amount of money so required by said local board of industrial education for the purposes of said sections.

3. The rate of tax levied for the purposes of sections 553p-1 to 553p-15, inclusive, in any town, village or city shall not in any one year exceed one-half mill for the maintenance of all schools created under said sections.

4. The said taxes for the purpose named in this section shall be in addition to all other special and general taxes

levied for town, village or city purposes and shall be for the use and support of schools established under sections 553p-1 to 553p-15, inclusive.

5. The treasurer of the town, village or city shall keep such money separate from all other money, to be used exclusively for the purpose of industrial education as provided in sections 553p-1 to 553p-15, inclusive. All moneys appropriated and expended under said sections shall be expended by the local board of industrial education and shall be paid by the town, village or city treasurer on orders issued by said board and signed by its president and secretary.

6. All moneys received by said board shall be paid to the town, village or city treasurer for the fund of the local board of industrial education.

Qualifications of Teachers.

(Section 553p-5.) 1. The qualifications of teachers and the courses of study in these schools shall be approved by the state board of industrial education, and shall include English, citizenship, physical education, sanitation and hygiene and the use of safety devices, and such other branches as the state board of industrial education shall approve.

Substitution of Other Work.

2. The local board of industrial education may allow pupils attending any school established under sections 553p-1 to 553p-15, inclusive, who have had courses equivalent to any of those offered, to substitute other work therefor.

Compensation for Board Members.

Section 20.33. (1) To each appointive member of the board a compensation of one hundred dollars per year and actual and necessary traveling expenses.

2. The director of vocational education and all other employees of such board shall receive such compensation as shall be fixed by the board, and shall be entitled to receive their actual and necessary traveling expenses incurred in the discharge of their official duties. Such compensation and expenses shall be charged to the appropriation to the state board of industrial education.

(3) The remainder shall be distributed for state aid for industrial schools established and maintained pursuant to subsection 1 of section 553p-3 of the statutes, and any school once granted such state aid shall be entitled thereto as long as the character of its work meets with the approval of the state board of industrial education as follows:

Reports of Local Boards.

(a) On the first day of July in each year the secretary of the local board of industrial education of each city, town or village maintaining such a school or schools shall report to the state board of industrial education the cost of maintaining the same; the character of the work done; the number, names, and qualifications of the teachers employed, and such other information as may be required by the said board.

(b) If it appears from such report that such school or schools have been maintained pursuant to law, in a manner satisfactory to the state board of industrial education, the state board of industrial education shall certify to the secretary of state, in favor of the several local boards of industrial education, amounts equal to one-half the amount actually expended, respectively, for maintenance of such school or schools and salaries for instruction and supervision; but not to exceed, exclusive of federal aid, in any one year, twenty thousand dollars for any city of the first class, or ten thousand dollars for any other city, town or village. If the aggregate of such amounts exceeds the available funds of this appropriation, the state board of industrial education shall deduct from each an equal proportion so as to reduce their aggregate to the amount of the available funds.

(c) On receipt of such certificates the secretary of state shall draw his several warrants accordingly, payable to the treasurers of the cities, towns, and villages, respectively.

Pupils.

Section 553p-7. The schools established under sections 553p-1 to 553p-15, inclusive, shall be open to all residents of the cities, towns and villages in which such schools are located, of fourteen years of age or over who are not by law required to attend other schools, and to all persons over fourteen years of age employed in said cities, towns or villages but who are residents of other municipalities maintaining industrial, continuation, commercial or evening schools; provided that no such person who is a resident of any municipality maintaining industrial, continuation or evening schools, shall be received in or admitted to classes in any such school in any other municipality, except upon presentation to the authorities of such school of the written approval of the local board of industrial education having charge of such school in the municipality wherein such person resides. Any city, town or village maintaining industrial schools as provided in sections 553p-1 to 553p-15, inclusive, that shall, as herein provided, admit to the privileges of such schools persons employed in such municipalities, but who are residents of other municipalities maintaining industrial schools, is empowered to collect tuition for the schooling of nonresident persons from the municipality in which the parents or guardians of such persons reside, in the same manner and at the same rate of tuition as is provided for the collection of tuition for nonresident pupils in section 553p-8. Any person over the age of fourteen who shall reside in any town, village or city not having an industrial school as provided in said sections, and who is otherwise qualified to pursue the course of study may with the approval of the local board of industrial education in any town, village or city having a school established under said sections, be allowed to attend any school under their supervision. Such persons shall be subject to the same rules and regulations as pupils of the school who are residents of the town, village or city in which the school is located.

Fee for Non-Residents.

Section 553p-8. The local board of industrial education is authorized to charge tuition fee for nonresident pupils not to exceed fifty cents per week. On or before the first day of July in each year the secretary of the local board of industrial education shall send a sworn statement to the clerk of the city, village or town from which any such person or persons may have been admitted. This statement shall set forth the residence, name, age and date of entrance to such school, and the number of weeks' attendance during the preceding year of each such person at the school. It shall show the amount of tuition which under the provisions of this act the town, city or village is entitled to receive on account of each and all such pupils' attendance. This statement shall be filed as a claim against the town, village or city where such pupil resides and allowed as other claims are allowed.

Students' Fees.

Section 553p-9. Students attending any school under sections 553p-1 to 553p-15, inclusive, may be required to pay for all material consumed by them in their work in such school at cost prices or in lieu thereof the school board may establish a fixed sum to be paid by each student in each course, which sum shall be sufficient to cover, as nearly as may be, the cost of the material to be consumed in such course; any manufactured articles made in such school and that may accumulate shall be disposed of at their market value at the discretion of the school board, and the proceeds shall be paid to the local treasurer for the fund of the local board of industrial education.

Subordinates.

(Section 20.73.) (1) Except as expressly provided by law, the governor, secretary of state, state treasurer, attorney general, state superintendent, commissioner of insurance, state fire marshal, superintendent of public property, railroad commission, dairy and food commissioner, superintendent of weights and measures, industrial commission, adjutant general, state board of control, grain and warehouse commission, civil service commission, tax commission, commissioners of public lands, state conservation commission, supervisor of inspectors of illuminating oils, state treasury agent, commissioner of banking, printing board, free library commission, state chief engineer, commissioner of agriculture, board of public affairs, state board of education, geological and natural history survey, state board of health, state highway commission, state board of medical examiners, state board of dental examiners, state board of pharmacy, state board of industrial education and state athletic commission are each authorized to appoint,—subject to the state civil service law in cases where the provisions thereof are intended to apply, and subject to the approval of such other officer or body as prescribed by law,—such deputies, assistants, experts, clerks, stenographers, or other employes as shall be necessary for the execution of their functions, and to designate the titles, prescribe the duties and fix the compensation of such subordinates.

SHIPMENT OF SHEET METAL SUPPLIES ON SHORT NOTICE.

Very often business is lost because of lack of materials, consequently prompt deliveries play an important part in the sheet metal contracting business. Tanner and Company, Indianapolis, Indiana, are in a position to ship rush orders on machines, tools, sheet metal, etc., whenever required and their stock is said to include everything needed, from a tinned rivet to a cornice brake, comprising such items as tin and terne plates, Toncan galvanized sheets, black and galvanized steel sheets; sheet copper, zinc and brass; sheet metal workers' tools and machines; Hart and Cooley, Tuttle and Bailey and other makes of warm air registers as well as warm air pipes and fittings. Full details can be obtained by addressing Tanner and Company, Indianapolis, Indiana.

LO! THE POOR WOODEN SHINGLE.

Sheet metal contractors have about as forceful and convincing an argument for sheet metal roofing as they possibly could have in the recent announcement that fire insurance interests are going to make war on the wooden shingle. There has been much agitation recently among insurance companies as to the danger of the shingle roof, since it is a breeder of so many disastrous fires. Hence, says C. M. Cartwright in the *Chicago Tribune,* rating organizations throughout the country in sending out revised rates have added a charge for the wooden shingle roof.

The recent conflagration at Atlanta, Georgia, which swept seventy-five blocks of houses, involving a property loss of $4,500,000, is directly traceable to wooden shingle roofs. It is found in every conflagration of this character that burning shingles are carried a mile or so away, starting new fires, and finally the blaze gets beyond the control of the fire department.

Fire protection bodies have been telling the people about the danger of wooden shingle roofs for some time, but seemingly little heed was paid to these warnings.

Now the man with a wooden shingle roof dwelling is to be penalized and, considering the extra fire insurance premiums he will have to pay, it will be to his advantage to put on a noncombustible roof at the start. *And this is where the contractor with sheet metal roofing gets his opportunity.*

The three conflagrations last year—Paris, Texas; Nashville, Tennessee, and Augusta, Georgia, were all traceable to the wooden shingle roof. During the last six months or so, insurance organizations have been collecting data as to the shingle roof menace, and so startling were the returns that the rating authorities at once decided that it was necessary to make a charge for the shingle roof.

In Chicago the Chicago board of fire underwriters a few years ago began allowing credit for a noncumbustible roof. In some cities the fire insurance men have been so active in calling attention to the danger of wooden shingle roofs that ordinances have been passed making them prohibitive in the fire district. The higher cost of materials and labor have made fire losses much more expensive to the insurance companies and hence more than ever they are active in attempting to reduce all physical hazards to a minimum.

It was found at Atlanta, for instance, that where an owner did not carry sufficient insurance or had none at all the blow fell on him more heavily than he anticipated, owing to the present price of building materials. Even at Atlanta insurance men had been urging the adoption of an ordinance preventing shingle roofs, pointing out the possible dangers, and yet sufficient influence could not be brought to bear to induce the city council to act.

In most of the cities today are large residential areas with wooden shingle roofs, and none is free from the conflagration hazard. Now that the rating authorities are taking hold of the situation and penalizing the shingle roof residence and making it an object to have noncombustible roofs, builders of new structures no doubt will find it to their advantage to use metal shingles or metal roofing.

A FEW FACTS ABOUT COPPER STEEL.

In the interesting booklet of "Facts" concerning Keystone Copper Steel which was recently issued by the American Sheet and Tin Plate Company, are cited the following pertinent pointers about this material: Keystone Copper Steel is an alloy made by adding a certain amount of copper to well made steel. Copper added to steel is not an impurity, any more than copper is an impurity in brass or bronze. It loses its identity as a metal by becoming thoroughly diffused with the steel, thus forming a new metal or alloy. Copper steel does not increase corrosion, but, on the contrary, retards it, as proven by exhaustive service tests and careful research work. Copper in steel also increases its ductility, makes it more workable. Keystone Copper Steel Products were awarded the Grand Prize at the Panama-Pacific International Exposition. Many other interesting facts concerning this material are given in the booklet, and copies can be obtained by addressing the American Sheet and Tin Plate Company, Frick Building, Pittsburgh.

VENTILATORS A GREAT NECESSITY IN WARM WEATHER.

With the coming of hot weather it becomes an absolute necessity to have fresh air in constant circulation, and this is made possible by the Star Fire Retarding Ventilator, shown in the accompanying illustration, which, it is claimed, is made to keep the fullest amount of pure fresh air constantly moving.

Star Fire Retarding Ventilator.

These ventilators are constructed from high grade materials by skilled mechanics and in the case of fire, are said to prevent the spread of flames upward, by means of a fusible link which parts, allowing the damper to close by gravity. It is declared that Star Ventilators exhaust foul air without possibility of down draft, are weather proof and distribute light through a section made up of heavy wired glass.

For further particulars dealers should write to Merchant & Evans Company, Philadelphia, or Chicago.

YOU YOURSELF.

Your greatest problem is yourself. You are also your greatest treasure. If you can get yourself determined upon—find out what you are and what you are for—and if you can discover and develop the elements of value in your nature, your life will take on the beauty of orderliness and your need of the savings bank will be less and less, for you will be your own riches.—Richard Wightman.

PUBLICITY PROPERLY DIRECTED LEADS PUBLIC OPINION IN RIGHT ROAD.

In America it is not possible to lead and drive people along any road that does not lead in the general direction of their inclinations and traditional beliefs and aspirations. But it is along those lines that it is now very essential they should go, and go with speed and sure-footedness. Publicity should lead them. Leaders there must be, or the progress forward is slow and uncertain. Publicity should now blaze the way for the people. It is more competent for the task than any other force. It is the only force that is competent. Therefore we hope that there will be immediate action to employ Publicity to aid in this national crisis.—George French.

QUICK WORK.

To American Artisan and Hardware Record:

Please discontinue our ad in American Artisan and Hardware Record. We have had several applications in the short time it appeared, and already have a man working for us.

Western Hardware Company.

Kenosha, Wisconsin, July 14, 1917.

NOTES AND QUERIES.

Scrap Iron.

From A. H. Rohrer, Cochrane, Wisconsin.

Please advise who buys scrap iron.

Ans.—Sam Goldberg, 620 West 63rd Street; Joseph L. Lieberman Iron Company, 110 South Dearborn Street; William Nathan and Company, 3764 South Halsted Street; E. Popper Iron Company, 3622 South Western Avenue; and Jacob Williams' Sons, 1855 South Canal Street; all of Chicago.

Air Starters.

From Charles Eby, Watseka, Illinois.

Can you tell me where I can obtain air starters for automobiles?

Ans.—Chicago Automobile Supply House, 1349 South Michigan Avenue; and the Stewart-Warner Speedometer Corporation, 1828 Diversey Parkway; both of Chicago.

Warm Air Heaters.

From the Gordon Plumbing and Heating Company, Gordon, Nebraska.

We would like to have the agency for some good warm air heater. Will you kindly refer us to some manufacturers?

Ans.—American Furnace Company, St. Louis, Missouri; Culter and Proctor Stove Company, Peoria, Illinois; Danville Stove and Manufacturing Company, Danville, Pennsylvania; Forest City Foundry and Manufacturing Company, Cleveland, Ohio; Haynes-Langenberg Manufacturing Company, St. Louis, Missouri; Henry-Miller Foundry Company, Cleveland, Ohio; Interstate Manufacturing Company, Oskaloosa, Iowa; Keith Furnace Company, Des Moines, Iowa; Lennox Furnace Company, Marshalltown, Iowa; Majestic Company, Huntington, Indiana; Meyer Furnace Company, Peoria, Illinois; Robinson Furnace Company, 205 West Lake Street, Chicago; Scheible-Moncrief Heater Company, Cleveland, Ohio; R. J. Schwab and Sons Company, 285 Clinton Street, Milwaukee, Wisconsin; Charles Smith, 63 West Lake Street, Chicago; Waterloo Register Company, 137 Rath Street, Waterloo, Iowa; Wise Furnace Company, Akron, Ohio; Wrought Iron Range Company, St. Louis, Missouri; Globe Stove and Range Company, Kokomo, Indiana; Germer Stove Company, Erie, Pennsylvania; Charles Smith Company, 57 West Lake Street, Chicago; Standard School Heater Company, 438 West Ontario Street, Chicago; Schill Brothers Company, Crestline, Ohio; Monroe Foundry and Furnace Company, Monroe, Michigan; XXth Century Heating and Ventilating Company, Akron, Ohio; V. A. Smith Company, 211 West Lake Street, Chicago; Tubular Heating and Ventilating Company, 228 Quarry Street, Philadelphia; and Utica Heater Company, 218 West Kinzie Street, Chicago.

Patent Window Sash Lock.

From the Wooden Ventilator Company, East Palestine, Ohio.

Will you please let us know of manufacturers of window sash locks who will make our patent window sash lock on the royalty plan or manufacture it for us?

Ans.—Allith-Prouty Company, Danville, Illinois; Caldwell Manufacturing Company, Rochester, New York; Champion Hardware Company, Geneva, Ohio; Lawrence Brothers, Sterling, Illinois; Morgan Spring Company, Worcester, Massachusetts; National Manufacturing Company, Sterling, Illinois; Payson Manufacturing Company, 2918 West Jackson Boulevard, Chicago; Peck, Stow and Wilcox Company, Cleveland, Ohio; Richards-Wilcox Manufacturing Company, Aurora, Illinois; and Lawson Manufacturing Company, 217 West Huron Street, Chicago.

Oil Die Tool Steel.

From J. Oscar Smith, 537 Reed Street, Moberly, Missouri.

Kindly advise who will purchase oil die tool steel.

Ans.—Columbia Tool Steel Company, 552 West Lake Street, Chicago.

White Frost Refrigerator.

From the McQuesten Hardware Store, Muscatine, Iowa.

Will you please give us the name of the manufacturers of the White Frost Refrigerator?

Ans.—White Frost Refrigerator Company, Jackson, Michigan.

ITEMS.

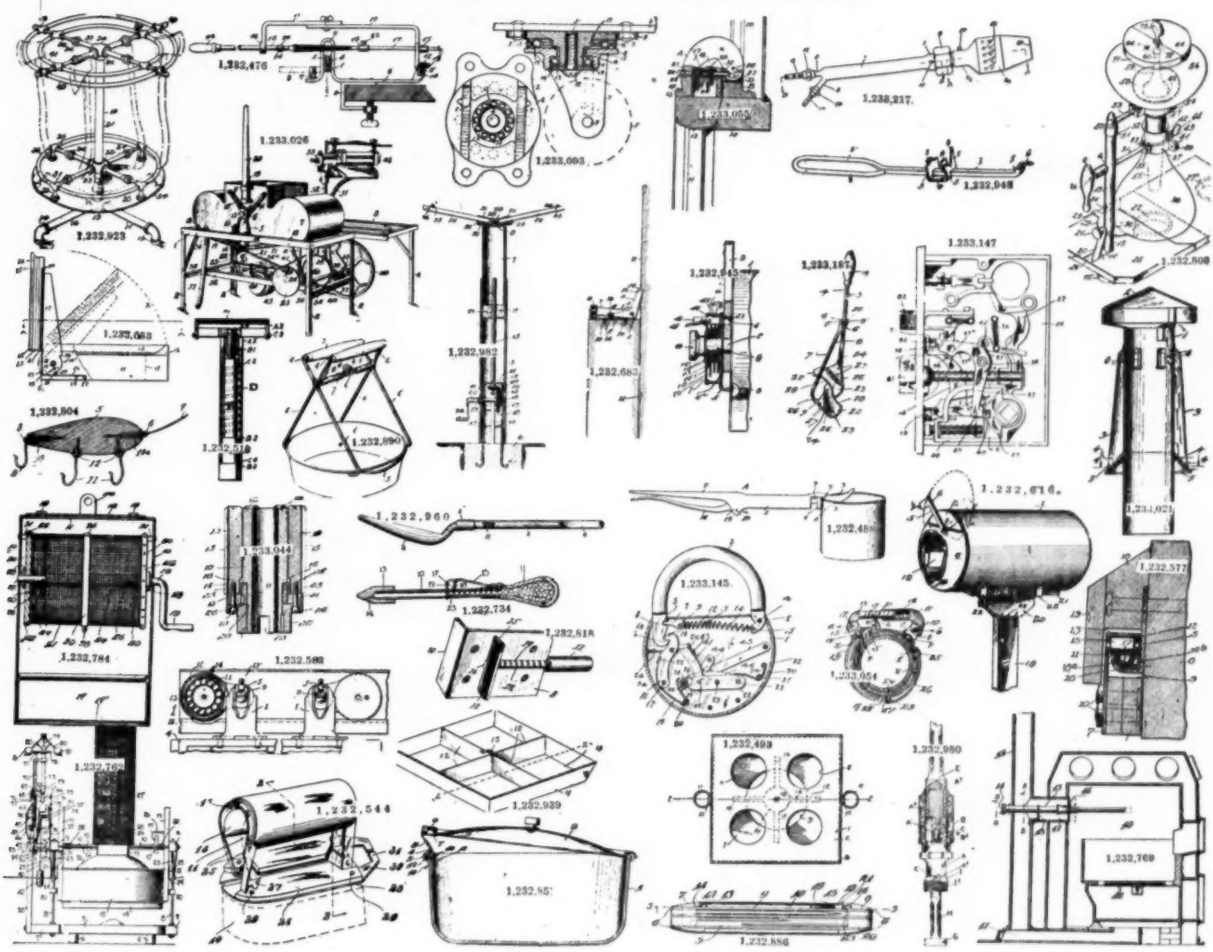
S. Birkenstein and Sons, metal dealers at 377 West Ontario Street, Chicago, have purchased a site on Hawthorne Street and are planning to erect a $30,000 warehouse.

C. R. Elliott is now representing the Wheeling Steel & Iron Company in Kansas City, Missouri. He was formerly in Chicago for the Company, and is recognized as being fully capable to do justice to the work in his new territory.

The Mohr-Jones Hardware Company, Racine, Wisconsin, has entered the sheet metal manufacturing field and is erecting a shop. The Company has increased its capital stock from $60,000 to $150,000 to provide adequate working capital.

Announcement is made that the first unit of the new tin plate plant of the Bethlehem Steel Company at Sparrows Point, Maryland, will soon commence operations. It consists of twelve mills of fireproof construction with all modern facilities. Their annual output will be about 1,000,000 base boxes of tin plate, but provision is made for an eventual production of 2,000,000 boxes a year.

NEW PATENTS.



1,232,476. Saw-Filing Machine. Lloyd J. Ashley, Mason City, Iowa. Filed April 6, 1916.

1,232,488. Lifter. Hugh Brooks, Glasgow, Mont. Filed May 11, 1915.

1,232,493. Cooking and Warming Attachment for Stoves. Joseph J. Case, Trenton, N. J. Filed Aug. 14, 1915.

1,232,519. Safety-Razor. Louis Jarvis Fay, Watts, Cal. Filed July 31, 1915.

1,232,544. Smoothing-Iron Holder. Joseph Herzl, New York, N. Y. Filed Aug. 3, 1916.

1,232,563. Door-Hanger. Jackson L. Kail, Chicago, Ill., assignor, by mesne assignments, to Winslow Bros. Company, Chicago, Ill. Filed Feb. 1, 1915.

1,232,577. Door-Hanger. Frederick A. Lester, Chicago, Ill. Filed Jan. 8, 1915.

1,232,616. Rural-Free-Delivery Mail-Box. James E. Shinn, Conway Springs, Kans. Filed April 11, 1916.

1,232,683. Automatic Sash-Lock. Orlando B. Hollis, Spokane, Wash. Filed March 27, 1916.

1,232,734. Case-Magazine Soldering-Iron. Ray M. Tilton, Panora, Iowa. Filed March 13, 1917.

1,232,762. Insect-Trap. Horatio S. Brown, Williams, Minn. Filed March 10, 1917.

1,232,769. Draft Device for Stoves and Furnaces. Patrick R. Carr, Chicago, Ill. Filed April 21, 1917.

1,232,784. Ash-Sifter Machine. Julius T. Frey, Detroit, Mich. Filed Oct. 3, 1916.

1,232,804. Bait. William J. Jamison, Chicago, Ill. Filed Sept. 2, 1914.

1,232,808. Percolator. Loeser Kalina, Brooklyn, N. Y. Filed April 21, 1916.

1,232,818. Door-Check. Julius A. Levy, Walla Walla, Wash. Filed May 2, 1917.

1,232,851. Attachment for Cooking Utensils. Rose Sayers, Philadelphia, Pa. Filed Jan. 26, 1917.

1,232,886. Combined Knife and Sharpening-Stone. Jess G. Boston, Chicago, Ill. Filed June 29, 1916.

1,232,890. Plate or Pan Lifter. Samuel E. Brunck, Coryjose, Cal. Filed Nov. 14, 1916.

1,232,923. Ax-Rack. Joseph M. Howeth, Holdenville, Okla. Filed Dec. 23, 1915.

1,232,939. Bake-Pan. Ellen W. Lively, Salisbury, N. H. Filed Sept. 2, 1914.

1,232,945. Permulation-Lock. Lewis E. McCahan, Wichita, Kans. Filed Oct. 3, 1916.

1,232,948. Can-Opener. Alexis Marchand, Bridgeport, Wash. Filed Aug. 6, 1912. Renewed Feb. 2, 1916.

1,232,960. Weighing-Shovel. David Moffatt Myers, New York, N. Y. Filed Oct. 5, 1914.

1,232,980. Counterboring-Tool. Aaron T. Rossignol, Savannah, Ga., assignor of one-half to Bryant Beasley, Savannah, Ga. Filed Nov. 12, 1915.

1,232,982. Clothing-Drier. John F. Scheidt, Wimbledon, N. D. Filed June 6, 1916.

1,233,021. Terminal for Ventilator-Shafts. William P. Boyle, Woodland, Cal. Filed Sept. 7, 1915.

1,233,026. Gearing for Washing-Machines and Other Apparatus. Frank Byron Churchill, La Marpe, Ill. Filed July 29, 1916.

1,233,044. Reamer. William H. Frick, Philadelphia, Pa., assignor of one-half to Samuel E. Frick, Philadelphia, Pa. Filed Dec. 7, 1915.

1,233,054. Hose-Clamp. Charles E. Hecox, Ontonagon, Mich. Filed June 1, 1916.

1,233,055. Automatic Window-Latch. John E. Heikkila, Syracuse, N. Y. Filed Nov. 2, 1916.

1,233,083. Saw-Guide for Cutting Miters. Edgar W. McMillan, Wichita, Kans. Filed Jan. 25, 1917.

1,233,093. Caster. Edward T. Malloy, Hamilton, Ohio. Filed Oct. 6, 1916.

1,233,145. Padlock. Orrin M. Thomas, Grant, Va. Filed March 7, 1917.

1,233,147. Lock. Henry G. Voight. New Britain, Conn., assignor to Sargent & Company, New Haven, Conn. Filed April 14, 1917.

1,233,187. Jar-Lifter. Richard H. Cocking, Salem, N. J. Filed Oct. 20, 1916.

1,233,217. Oil-Vapor-Heating Torch. Paul L. Geer, Sanville, Pa. Filed Dec. 14, 1915.

WEEKLY REPORT OF TRADE AND THE MARKETS

STEEL TRADE SATISFIED WITH NEWS OF GOVERNMENT CONTROL.

The feeling in the steel trade in connection with the result of last week's conferences in Washington is one of satisfaction, despite the fact that reports to the contrary are being circulated. It is understood that the actual basis of prices, so far as the general trade is concerned, remains to be worked out, but this is regarded merely as a detail. Steel men are more and more beginning to look upon an understanding of prices between the Government and the trade as highly desirable. There was quite a difference of opinion two months ago, but the developments of the past two weeks have shown them that an open market could not be maintained with safety.

As yet, nothing definite has come from Washington about the basis of prices to be fixed. Buyers and sellers are in the dark, and trading is practically stopped except for small lots of finished steel for early delivery and occasional carloads of pig iron for particularly spot shipment. A report was current that the Trade Commission had already decided upon the price, but this was not credited because it was understood that the basis, in some degree at least, would be an agreed-to basis, and representatives of the trade have so far denied that they have entered into any agreement. The trade recognizes that the Government has the power to enforce any price its representatives may decide upon, but it is believed that no attempt to enforce that authority will ever be made.

Few in the trade expect to obtain anything like the price now quoted as the market. In fact, there has been little steel of any kind sold at even approximately the prices quoted. The difference between the actual prices received for steel last year and those established by the Government will not be great.

Peace prospects have not impressed the trade. Hope of peace is regarded as dependent upon the absolute democratization of the German Empire and while it is believed the first steps in that direction have been taken, the goal is still regarded as being a long way off.

The business that will be awaiting the end of the war will insure full time for many months and many of the producers are impatient to resume normal work.

STEEL.

The whole finished steel trade is marking time these days and awaiting definite developments in the price fixing matter. There are occasional transactions in finished steel products but in point of tonnage they amount to nothing and it certainly would be unfair to base a market report upon them. Foreign inquiry for plates is the only active element in the market outside of government inquiry and bookings. The inquiry for plates for foreign account at the moment runs high, but very little of it is being accommodated. No quotations made for the foreign inquiry are available. The price of plates in general remain about unchanged. The makers are not worried at the small amount of business outside of government work in prospect, as most of them are out of the market anyway, and would be unable to take care of new business if it were offered.

COPPER.

It is reported in financial circles that the copper producing companies have thus far not accepted the Government's offer to pay 75 percent of the 25 cent price on the 60,000,000 pounds of copper recently ordered, the remaining 25 percent to be held unpaid until an investigation has shown what a fair figure would be. There is little change in the situation, which continues to be one of stagnation and uncertainty. The drift continues in the direction of lower offers to sell without business resulting. There is reason to believe the report that large producers have sold copper at 25 cents for first quarter of 1918 and the surprising thing is that they have been able to find buyers so far ahead at this price. Small dealers in copper have reduced prices from 7 to 8 cents in the past week or so. Spot and July Electrolytic is obtainable at about 27¾ to 28¼ cents; August is offered at 27½ cents; third quarter at 26½ to 27½ cents and last quarter at 25½ to 26½ cents. Quotations on the later deliveries are entirely nominal. Casting copper is also easier, and Prompt and July is offered nominally at 27 to 28 cents and August at 27 to 27½ cents.

SPELTER.

Complaint is heard in every direction regarding the lack of demand from spelter consumers, and it is felt to be strange that dealers who know the cost of producing the metal, and the certainty that a demand is accumulating that must be sooner or later taken care of, do not invest in the metal at around 8½. But the explanation is that the absence of demand is not in this metal alone. It applies to all metals, and also to a great many other commodities. The country is going through a period of scare on price control, and is exaggerating the prospect of what may happen. In the case of spelter a price fixed at cost plus fair profit would mean at least 10 cents per pound or an advance of 1½ cents over present market, while in copper and lead it would mean a sharp reduction from present market prices. But spelter buyers apparently do not reason it out, and are drifting with the present tide of doing nothing. Under the stress of dull business the market continues to grow easier in tone and prices at East St. Louis are 8½ cents for spot and 8⅝ cents

for August and September. Chicago warehouses have decreased prices on spelter in slabs ½ cent per pound, the quotation now being 10 cents.

SOLDER.

Solder prices in the Chicago market remain the same as those quoted in AMERICAN ARTISAN AND HARDWARE RECORD last week, and are as follows: Guaranteed, ½ & ½, 39½ cents; Commercial, ½ & ½, 37½ cents; Number 1 Plumbers', 35½ cents.

TIN.

Although tin is not subject to any price fixing policy that may be put in force by the Government, still the complete stagnation existing in other metals by reason of this fear is reflected in the indifference of both buyers and sellers to trade. Compared with other metals, however, there is rather more business doing, and a few consumers' orders for prompt delivery are being placed each day at full prices for Straits tin, and at large concessions for other grades. The stock of Straits on spot seems to be very small, and as the tin plate mills only buy this grade, and are the busiest industry at present using tin, the Straits market is kept very firm for early deliveries.

The spot market for Straits is firm at about 62½ cents, while tin to arrive during the following months is held at about 60¾ cents for August, 59¼ cents for September, 57¾ cents for October, 56¾ cents for November, and 55¾ cents for December.

LEAD.

No change is reported in the trust price on lead and it is said that independent producers are not trying to makes sales and are holding for the same price as the trust. This only makes it remarkable that the comparative few outside lots for spot, July and August offering at ½ cent per pound less are not quickly absorbed, and illustrates the acute stagnation and lack of confidence on the part of buyers.

Second hand lots continue to be offered for sale for prompt, July and August at 10½ cents New York, and the St. Louis price is entirely nominal at around 10⅝ to 10¾ cents with, of course, no buyers in view of the lower New York market. Chicago warehouses have again decreased prices on pig and bar lead, the drop this time being 75 cents per 100 pounds. American pig is now quoted at $11.50 and bar at $12.00.

WIRE PRODUCTS.

The leading interest has taken definite steps to stop any further advances in the price of wire nails. It has notified regular customers that wire nails will be furnished at $3.20 per keg, the same price which is being obtained from the government, upon the condition that only a reasonable profit should be charged to the ultimate consumer. Inquiry having proven that 50 cents per keg is a reasonable profit, this, it is said, would make the retail selling price $3.70 per keg, whereas the independent manufacturers have been charging $4.00 per keg in wholesale lots. It is understood also that all retail sales were made at $4 50 per keg or higher. The present innovation, it is said, will probably cause independent manufacturers to meet the price of $3.20 per keg or suspend sales.

SHEETS.

The situation in steel sheets in the Chicago district shows little change, mills doing virtually no business despite the heavy demand. Government orders for sheets continue to take a large share of the mills' capacities. Prices remain as quoted in last week's issue of AMERICAN ARTISAN AND HARDWARE RECORD.

OLD METALS.

The iron and scrap market continues inactive with prices unsettled and weaker, pending announcement of the course to be pursued by the Government respecting the measure and character of control it will exercise over iron and steel products. Fundamentally there is no change in the situation regarding requirements of consumers, practically all of whom, barring the uncertainty that attaches to the anticipation of arbitrary price-regulation, would probably be buying as freely as they have been in the past few weeks.

So far as consumption in Chicago is concerned, buying is practically at a standstill. The demand from eastern points has likewise dropped off, leaving the market without support in any quarter. Prices, in consequence, have declined $2 to $3 a ton on leading grades, and a dollar or more on most of the remaining items of the list. Wholesale dealers' quotations, which may be considered nominal, are as follows: Old steel axles, $46.00 to $48.00; old iron axles, $46.00 to $48.00; steel springs, $39.00 to $40.00; Number 1 Wrought iron, $38.00 to 40.00; Number 1 Cast iron, 27.00 to $28.00, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 20 cents; light brass, 12½ cents; lead, 7¾ to 8¼ cents; zinc, 5½ to 6 cents; cast aluminum, 27 cents.

PIG IRON.

Several factors have caused a dull market in pig iron during the past week. Buyers and sellers are inclined to await developments at Washington, where definite steps regarding prices may soon be taken, before figuring further in the market for extended delivery. In addition to the influence caused by prospects of price regulation, the general market, as stated last week, is going through the usual period of inactivity through the summer months. This has caused no fear or apprehension, since melters some time ago covered third quarter requirements. Tremendous tonnages have also been sold for shipment in the fourth quarter of 1917 and the early part of 1918. There is a general belief that some Government action will eventually be taken which will have an effect upon future prices of pig iron, but it is not believed that any action will be taken which will vitiate existing contracts. Since very heavy contracts for pig iron have been placed for delivery in a year and in some cases for shipment over the next 18 months, it would require at least six months and probably longer to adjust such contracts without throwing the entire industry into chaos.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.

PIG IRON.

Basic	$55 00
Northern Fdy., No. 2	55 00
Southern Fdy., No. 2	$50 00- 54 00
Lake Sup. Charcoal	59 50- 62 00
Malleable	55 00

FIRST QUALITY BRIGHT TIN PLATES.

		Per Box
IC	14x20	$15 10
IX	14x20	17 05
IXX	14x20	19 00
IXXX	14x20	20 45
IXXXX	14x20	21 90
IC	20x28	30 20
IX	20x28	34 10
IXX	20x28	38 00
IXXX	20x28	40 90
IXXXX	20x28	43 80

COKE PLATES.

Cokes, 180 lbs.	20x28	$27	30
Cokes 200 lbs.	20x28	27	50
Cokes, 214 lbs.	IC 20x28	28	00
Cokes, 270 lbs.	IX 20x28	30	50

BLUE ANNEALED SHEETS.

No. 10	per 100 lbs.	$9 30
No. 12	per 100 lbs.	9 35
No. 14	per 100 lbs.	9 40
No. 16	per 100 lbs.	9 50

ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs.	$9 55
No. 22-24	per 100 lbs.	9 60
No. 26	per 100 lbs.	9 65
No. 27	per 100 lbs.	9 70
No. 28	per 100 lbs.	9 75

GALVANIZED

No. 16	per 100 lbs.	$11 00
No. 18-20	per 100 lbs.	11 15
No. 22-24	per 100 lbs.	11 30
No. 26	per 100 lbs.	11 45
No. 27	per 100 lbs.	11 60
No. 28	per 100 lbs.	11 75
No. 30	per 100 lbs.	12 25

POLISHED SHEET STEEL.

No. 24	per 100 lbs.	$10 05
No. 26	per 100 lbs.	10 10
No. 27	per 100 lbs.	10 15
No. 28	per 100 lbs.	10 25

SMOOTH SHEET STEEL.

		Per 100 lbs.
Wood's Smooth	No. 20	$9 75
" "	No 22-24	9 80
" "	No 25-26	9 85
" "	No. 27	9 00
" "	No. 28	10 00

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, 100 lbs., base No. 28 ..... $13 75

SOLDER.

XXX Guaranteed ½ & ½ ..per lb.	39½c
Commercial ½ & ½ ..... "	37½c
No. 1 Plumbers ..... "	35½c

SPELTER

In Slabs 10c

SHEET ZINC.

Cask lots	$22 00
Less than Cask lots	$22 50 to $23 00

COPPER.

Copper sheet, base 39c

Soldering.

3 lb. and heavier	per lb.	48c
2½ lb.	" "	49c
2 lb.	" "	50c
1½ lb.	" "	51c
1 lb.	" "	54c

LEAD.

American Pig	$11 50
Bar	12 00
National (White) brands (in less than 100 lb. lots), per lb.	11c

Sheet.

Full coils	per 100 lbs.	$13 25
Cut coils	per 100 lbs.	13 50

ALUMINUM

Carload lots.

No. 1 Pure Ingot	per lb.	$0 60
Sheets	"	75

TIN.

Pig tin	per lb.	70c
Bar tin	"	71c

HARDWARE.

ADZES.

Carpenters'.

Plumbs	15%

Coopers'.

Barton's	15%
White's	15%

Railroad.

Plumbs	20%

AMMUNITION.

Caps, Percussion—per 1,000.

F. L., Waterproof, 1-10s	32%
G. D	32%
Musket	32%

Shells, Loaded—

Loaded with Black Powder	32%
Loaded with Smokeless Powder, medium grades	32%
Loaded with Smokeless Powder, high grade	32%

Winchester:

Smokeless Repeater Grade	32%
Smokeless Leader Grade	32%
Black Powder	32%

U. M. C.

Nitro Club	32%
Arrow	32%
New Club	32%

Gun Wads—per 1000

Winchester 7-8 gauge	$2 25
" 9-10 gauge	1 94
" 11-28 gauge	1 63

Powder.		Each
DuPont's Sporting, kegs		10 25
" "	½ kegs	5 40
" "	¼ kegs	2 85
DuPont's Canisters, 1-lb		56
" "	½-lb	32
" Smokeless drums		43 50
" "	½-kegs	11 25
" "	10-can drum	9 00
" "	¼-kegs	5 75
" "	canisters	1 00
L. & R. Orange, Extra Sporting kegs		10 25
L. & R. Orange, Extra Sporting ½-kegs		5 40
L. & R. Orange, Extra Sporting ¼-keg		2 85
L. & R. Orange, Extra Sporting 1 lb. canisters		56
L. & R. Orange, Extra Sporting ½-lb. canisters		32
L. & R. Orange, Extra Sporting ¼-lb. canisters		22
Hercules "E. C." and "Infallible" 50 can drums		43 50
Hercules "E. C.," kegs		22 00
Hercules "E. C.," ½-kegs		11 25
Hercules "Infallible," 25 can drums		22 00
Hercules "Infallible," 10 can drums		9 00
Hercules "E.C.," ½-kegs		5 75
Hercules "E.C." and "Infallible" canisters		1 00
Hercules W. A. .30 Cal. Rifle, canisters		1 25
Hercules Lightning Rifle, canisters		1 25
Hercules Sharpshooter Rifle, canisters		1 25
Hercules Unique Rifle, canisters		1 50
Hercules Bullseye Revolver, canisters		1 00

ANVILS.

Trenton, 70 to 80 lbs	9½c per lb.
Trenton, 81 to 150 lbs	9¾c per lb.

ASBESTOS.

Board and Paper ..... 16c per lb.

AUGERS.

Boring Machine	60%
Irwin's	25%
Carpenter's Nut	50&10%

Hollow.

Bonney's—list $30.00	75 & 5%
Stearns, No. 3	36 00

Post Hole.

Digwell, 8-inch	per doz.	$12 50
Iwan's Post Hole and Well		35%
Vaughan's, 4 to 9-in.	per doz.	8 25

Ship.

Ford's, with or without screw	25%
Snell's " " "	25%

AWLS.

Brad.

No. 3 Handled	per doz.	$0 50
No. 1050 Handled	"	1 05
Shouldered, assorted 1 to 4	per gro.	4 00
Patent asst'd, 1 to 4	"	85

Harness.

Common	"	1 05
Patent	"	1 00

Peg.

Shouldered	"	1 60
Patent	"	75

Scratch.

No. 1 handled	per doz.	65
No. IS, socket han'ld.	"	1 35
No. 7 Stanley	"	1 95

AXES.

Boy's Handled.

Niagara	"	9 00

Broad.

Plumbs, West, Pat		List
" Can. Pat		$53 00
" Firemen's (handled)	per doz.	$19 0

Single Bitted (handled).

Warren Silver Steel	14 0
Warren Blue Finished	13 0
Rough Rider	12 5
Perfect Premier, Forest Clipper	12 2

Single Bitted (without handles).

Warren Silver Steel	12 0
Warren Blue Finished	11 5
Rough Rider	11 0

Double Bitted (without handles).

Blood's Champion, 3½ to 4½ lb.	per doz.	14 75
Flint Edge	"	11 50
Perfect Premier	"	12 50

The above prices on axes of 3 to 4 lbs. are the base prices.
3½ to 4½ lbs. advance 25c.
4 to 5 lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$2 50	3 75	4 50	5 00

BALANCES, SPRING.

Pelouze 20%

BARS, CROW.

Pinch or Wedge Point, per cwt. . $5 00

BASKETS.

Clothes.

Small Willow	per doz.	10 00
Medium "	"	11 00
Large "	"	13 00

Galvanized Iron.	½ bu.	1 bu.	1½ bu
Per doz	$8 00	11 50	15 00

BEATERS.

Carpet.	Per doz.
No. 17 Tinned Spring Wire	$ 1 10
No. 18 Spring Wire coppered	1 40
No. 10 Preston	1 10

Egg.	Per doz.
No. 50 Imp. Dover	$ 1 10
No. 102 " " tinned	1 35
No. 150 " " hotel	2 10
No. 10 Heavy hotel tinned	2 10
No. 13 " " "	3 30
No. 15 " " "	3 60
No. 18 " " "	4 50

BELLOWS.

Blacksmiths' 40%

Hand.

	8	9	10	12
Per doz.	$8 00	9 00	10 00	12 75

Moulders'.

12-inch ..... Per doz. 15 00

BELLS.

Call.

3-inch Nickeled Rotary Bell, Bronzed base	per doz.	$5 00

Cow.

High Grade	60%
Kentucky	35%

Door.	Per doz.
New Departure Automatic	$7 50
Rotary.	
3 -in. Old Copper Bell	5 00
3 -in. Old Copper Bell, fancy	7 00
3 -in. Nickeled Steel Bell	5 50
3½-in. Nickeled Steel Bell	6 00

Hand.

Hand Bells, polished	15%
White Metal	15%
Nickel Plated	10%
Swiss	15%
Silver Chime	10%

Miscellaneous.

Church and School, steel alloys ... 30%

Farm, lbs.	40	50	75	100
Each	$2 25	3 00	4 00	5 50

BEVELS, TEE

Stanley's, rosewood handle, new list	Nets
Stanley's iron handle	Nets

BINDING, OILCLOTH.

Zinc	65%
Brass	50&10%
Brass, plated	70&10%

BITS.

Auger.

Jenning's Pattern	40&10%
Ford's Car and Machine	30%
Ford's Ship	30%
Irwin	35%
Russell Jenning's	30%
Clark's Expansive	50&5%
Steer's " Small list, $22 00	25%
" " Large " $26 00	25%
Irwin Car	35&10%
Ford's Ship Auger pattern Car	30%

Center 10%

Countersink.

No. 18 Wheeler's	per doz.	$1	80
No. 20 "	"	2	40
American Snailhead	"	1	10
" Rose "	"	1	30
" Flat	"	1	20
Mahew's Flat	"	1	00
" Snail	"	1	50

Dowell.

Russell Jennings	30%

Gimlet.

Standard Double Cut		25%
German Pattern	per doz.	$0 75
German	"	80
Gouge	"	80
Spoon	"	15%
Countersink	"	1 30

Reamer.

Jenning's Square	"	2 50
Standard Square	"	2 00
American Octagon	"	1 75

Screw Driver.

No. 7 Common	"	75
No. 1 Triumph	"	1 25